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EDITOR

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EDUCATIONAL REVIEW

JUNE, 1897

I

THE NEW GIFTS OF THE KINDERGARTEN

The gifts of the kindergarten show a wonderful insight into the needs of little children. The children receive them joyously, they play with them happily, justifying the name which Froebel gave them, "Life gifts" to the child. To Froebel the objective world presented a vast synthesis of form, constructed according to law. This law he embodied in a progressive series of educational playthings in order that the child might become familiar with the principle of construction and create for himself in endless variety.

The first three gifts—the soft balls; the sphere, cube, and cylinder; and the cube divided once in every dimension—were intended more for the plays of mother and child in the nursery than for later use in the kindergarten. This does not mean, however, that they were to have no place in the kindergarten. Froebel lays special stress upon the importance of all joyous activity which the mother and young child share, that the sense of inner union slumbering in the child may be quickened, aroused. A little later the child will play alone or with other children, but if he feels this inner bond between his mother and himself he will ever turn to her for sympathetic understanding.

The third gift is the first of a series of four building gifts, the third, fourth, fifth, and sixth; the seventh gift consists of tablets, then follow the jointed and disjointed slats, sticks, rings, and seeds. In this analysis of form we have solids,

surfaces, lines, and points represented, each gift in its recombination calling forth from the child more of invention than its predecessor. This is the material in common use, but does not include the whole of Froebel's idea for the gifts.

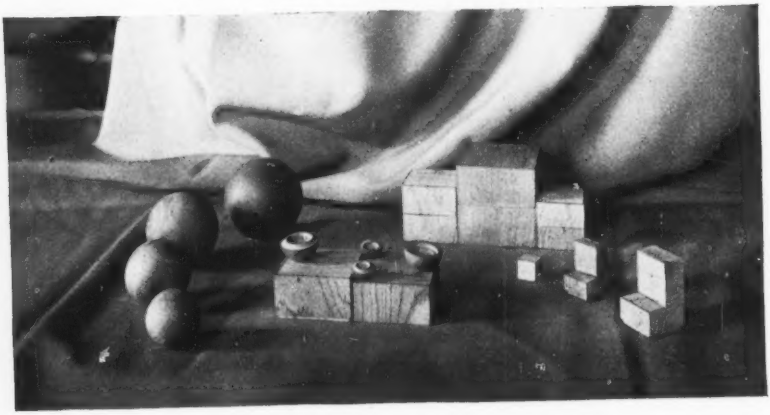
In the paper entitled, "Complete exposition of the material of occupation in the kindergarten," Froebel introduces another form into the second gift (sphere, cube, cylinder) as an intermediary, the cone. For this reason: the cylinder, it is true, unites the sphere and cube, possessing characteristics of each; but it has no corners and can give no idea of rotation upon one point. The cone has the curved and flat surface, edge, corner or point, thus having some point in common with each of the other forms, and when the four forms are revolved, the cone shows a connection between the other three. In nature we find many forms based upon the cone, a familiar one being that of the evergreen tree.

In Barnard's *Child culture papers*[1], in an article by M. Jules Guillaume, a description is given of the complete series of gifts as planned by Froebel. Of these the cone, the second gift analyzed, and the original seventh and eighth gifts, are not included in the ordinary material of the kindergarten, and, with the exception of the cone, have never been manufactured. The original seventh gift would make possible, by a rearrangement of the blocks, the construction of the principal regular polyhedrons; the eighth gift included a number of double pyramids, making a close connection with basic mineralogical forms. The material which Froebel devised for the intermediate class takes up this thought and carries it onward into the realm of natural science and mathematics.

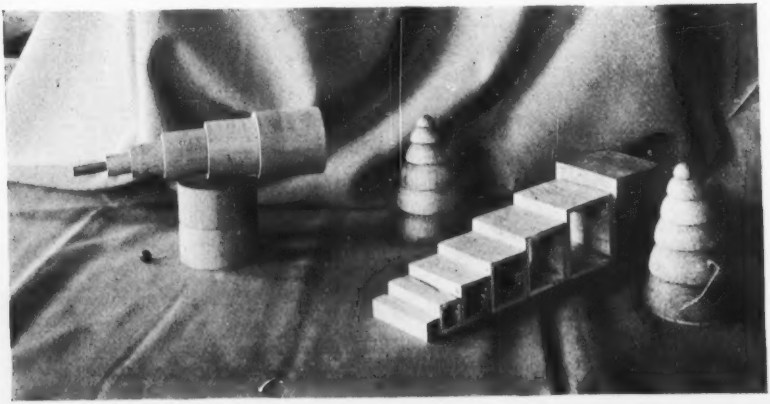
In the present gifts we have an evolution of form, one gift growing out of the preceding and suggesting the next as its natural development. Even this is incomplete because it is along the line of rectilinear forms only, and in the second gift we are introduced to curved bodies also. The seventh and eighth gifts were to show several forms existing in one, thereby creating an impression of the unity of all forms such as nothing else could give the child, and of a

[1] Pp. 353–369

1. COMPLETE SET, SECOND GIFT ANALYZED



2. FIRST GROUP; ONLY SPHERES AND CUBES SHOWN



3. SECOND GROUP; CONCENTRIC HALF BALLS, CUBES, AND CYLINDERS

definite standard of comparison between the rectilinear forms found in the cube and the cube itself. These gifts were never completed by Froebel.

With the gifts as we now have them, we introduce the child to three fascinating forms with which he can represent the active life about him. A little later, when he shows a desire to investigate his playthings, we give him one, the cube, divided so that he can take it apart, rearrange the component parts in an infinite number of ways, find out all about it, and much of the things he seeks to represent. He is, however, just as deeply interested in his sphere and cylinder, but these, for some unknown reason, are dropped and never again heard of. The forms seen in spinning the cube, which were to be embodied in the missing seventh and eighth gifts, are also not included in the sequence of gift material.

The gifts illustrated in this article give an analysis of each of the forms of the second gift. They are similar to those indicated by Froebel, but not wholly like them. The following tables show the exact difference:

THE SECOND GIFT ANALYZED

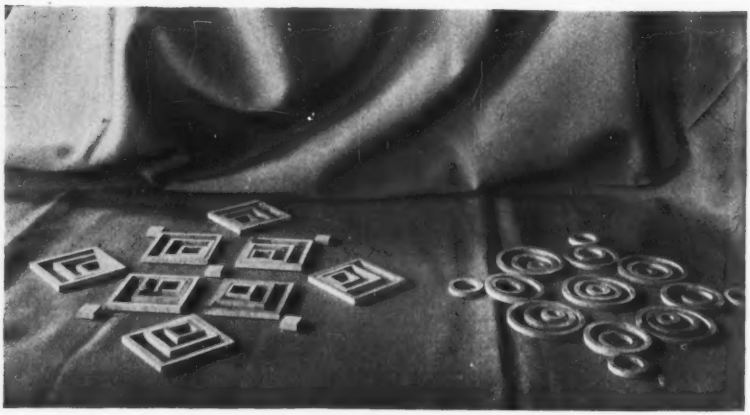
FROEBEL'S GIFTS	THE AUTHOR'S GIFTS
Divisions of the Sphere	*Divisions of the Sphere*
1. Parallel to the periphery (or curved surface) either in half balls or in balls one inside the other.	1. Parallel to the periphery, in balls one inside the other (spherical boxes).
2. Parallel to a great circle, that is, in zones.	2. Half balls (not boxes) inclosed in a spherical box.
3. Through three great circles cutting at right angles, or in eight equal spherical triangles.	3. Parallel to a great circle, tablets, inclosed in a spherical box.
	4. Through three great circles cutting at right angles; the whole inclosed in a spherical box.
Divisions of the Cylinder	*Divisions of the Cylinder*
1. Parallel to the cylindrical surface, consequently into cylinders of different sizes.	1. Parallel to the cylindrical surface; boxes.
2. Parallel to the base of the cylinder or into equal zones.	2. Parallel to surface (cylinders telescoped), inclosed in a cylindrical box.
3. Through the *two* planes, cutting at right angles.	3. Parallel to the base of the cylinder, tablets; inclosed in a cylindrical box.
4. Into circles or rings of No. 1.	4. Tablets of No. 3 cut into circles or rings; inclosed in cylindrical box.
	5. Through *three* great circles cutting at right angles.

Divisions of the Cone	*Divisions of the Cone*
1. Parallel to the curved surface (or small cones).	1. Parallel to the curved surface, cones one within another; boxes.
2. Parallel to the base, in zones.	2. Cones one within another; concentric, inclosed in a conical box.
3. Through the *two* planes which cut at right angles in the axis.	3. Parallel to the base in tablets; inclosed in a conical box.
4. Into conic sections.	4. Through *three* planes which cut at right angles; inclosed in a conical box.
	5. Into conic sections; inclosed in a conical box.
	(NOTE) 2, 3, 4, and 5 reserved for the older children, in Connecting Class.
Divisions of the Cube.	*Divisions of the Cube*
(Not a part of this series of gifts).	1. Cubes, one inside the other, boxes.
Third, fifth, seventh gifts into cubes; fourth, sixth, eighth gifts into bricks.	2. Square prisms telescoped, inclosed in a cubical box.
	3. Parallel to the base in square tablets, inclosed in a cubical box.
	4. Square tablets of No. 3, cut into hollow squares; inclosed in a cubical box.
	5. Through *three* planes which cut at right angles; inclosed in a cubical box.

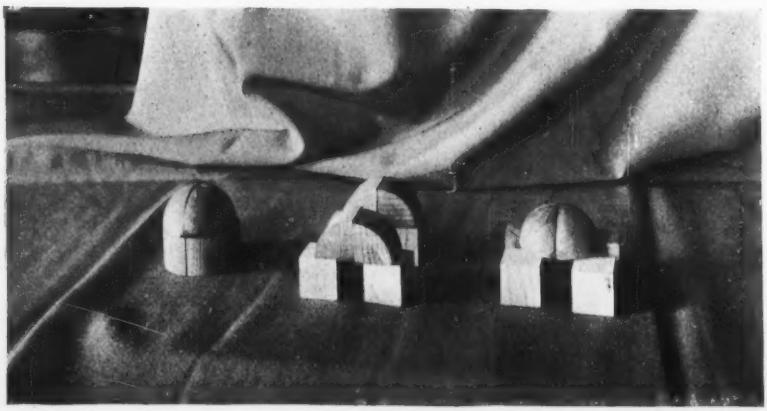
The main features presented in the new gifts are that they are inclosed in boxes, each in form like the gift within, and the divisions made in the sphere and cylinder are also made in the cube. Minor differences are that under (1) of the sphere, Froebel gives a choice of half balls or boxes within boxes. Both of these are included in the new gifts. In the cylinder, Froebel has not the nest of boxes, and instead of cutting the cylinder through three planes, corresponding to the cut of the third gift, he has divided it by two planes at right angles. The cone has been divided similarly to each of the other new gifts, and also into conic sections, but it is thought wise to reserve all but the solid cone and the nest of cones for the older children—those of the Connecting Class.

It is scarcely necessary to speak of the delight which the nest of boxes gives the little child. Almost everyone remembers the joy of playing with some similar toy. A restless child of three and a half years played by herself with the nest of balls for over an hour, contentedly taking it apart

4. THIRD GROUP; SPHERE, CUBE, AND CYLINDER CUT IN TABLETS



5. FOURTH GROUP; HOLLOW FORMS OF SECOND GROUP CUT INTO RINGS



and putting it together again. At the end of this time she said, as if to herself, "They keep getting littler and littler and then bigger and bigger." Several weeks passed before the child met again the friend who had given her the attractive toy to play with; her first question, almost without greeting, was, "If mamma and I go to your house can we get that ball?"

In the first group of this series of gifts we have four nests of boxes, in shape like that of the sphere, cube, cylinder, and cone. At the center of each nest is a small solid form like the exterior in shape. These gifts satisfy the instinct of the child to get within objects, to take apart and reconstruct. Incidentally the form is made clear to his mind by the difference in size, and its special characteristics are emphasized by repetition. A child at first is happy in simply taking these apart and putting them together; then greater possibilities suggest themselves to his mind. The balls are now a family, the difference in size suggesting father, mother, and children, their various activities being represented by the rolling of the balls. The cubes become houses, chairs, tables, anything having rectilinear form. The cylinders are called trees, barrels, boxes, etc.; the cones, hills, tents, caps, etc.

The second group, concentric half balls, cubes, and cylinders, suggest the growth of certain vegetables such as beets, onions, etc.; the cylinder, the growth of trees; the cube, some forms of crystallization. Little children pile up the half-balls (Fig. 2), or play with them as bowls for stirring cake, etc. The cube, when taken apart, may be placed as steps, tower, or tunnel. The cylinders make a fine cannon (Fig. 3), or a telescope. Separated, the cylinders resemble many cylindrical objects, and may be used as would those objects in life.

The third group, the sphere, cube, and cylinder cut in horizontal planes, are best used in decorative forms, although the children call the circular tablets plates or cookies, and play with them accordingly.

The fourth group, the rings and hollow squares, can be used to make very beautiful designs. The Froebel drawing

in circles and squares can be very easily represented with this material.

The fifth group, the sphere, cube, and cylinder, cut once in every dimension, make the child familiar with the fact of the three dimensions lying within every solid form, and in building furnish him with the cubical block, the dome, and the arch.

The models for these gifts have been made the same size as the second gift, for the reason that the child is familiar with the forms of this size, and it gives him great delight to meet these old friends under a new guise. There could be no objection to making them larger if it were thought wise to do so.

No child can play with these gifts and not gain a thorough acquaintance with the sphere, cube, and cylinder (types of an infinite number of forms), their connection with each other, and the relation of their several parts. While a knowledge of form and the laws governing its relations to man is fundamental in a world filled with material objects, it is by no means of first importance in the education of the child. He is, above all things, a social being, born into certain relationships, which are like ever-widening circles as he grows up and comes into a knowledge of his position as a member of a community, state, nation—of humanity. The first playthings of the child are a means of placing him in a closer union with his mother, playfellows, the members of his household. They help him to understand his environment by giving him a means of representing it. By imitating in play the active life around him he comes to understand it, and to feel a sympathy for others he otherwise would not know. The child, when he comes into the kindergarten, is a little egotist. "I want this," and "I want that," are the words constantly on his lips. He builds a house with his blocks on a corner of the table, and, perhaps, even guards it with his hands, so jealous is his sense of possession. The kindergartner notices what he has made, recognizes his effort and that of his neighbor, and gradually leads him to be willing to cooperate with others. "Mary has made a train of cars; would

you not like to make a railway station?" Presently all of the children are working for some common end, each in his individual way, recognizing the rights of others and showing a love and unselfishness toward each other impossible in the beginning.

One of the greatest results attained in the kindergarten is that each child is gradually acquiring the power to become self-directed; to think, to do, and to control himself when necessary. The kindergarten is the beginning of an education in life, not life on the surface but life in its heights and depths, in its richness and fullness. Froebel says to the mother and kindergartner, "Remain thou in the unity of life thyself, if thou wouldst lead the child therein," and this is the goal toward which all education should point, simple living, high thinking, right relationships, the strength and will to do the right—in a word, the unity of life.

MINNIE M. GLIDDEN

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BROOKLYN, N. Y.

II

HONORARY DEGREES IN THE UNITED STATES[1]

The Ph. D. degree is distinctively a German specialist's degree. It is unknown in England and marks the influence of German ideas in the development of our higher education. Most of our students who have studied in Germany have done so in the last forty years. Yale introduced the degree into the United States in 1860, and Harvard began using it in 1871.

The history of the protests against the abuse of honorary degrees, and especially against the debasement of the doctor's degree in the United States, begins more than a quarter of a century ago.

1. It is now nearly thirty years since President Gilman, at that time professor in Yale College, called attention in an article in the *Nation* to the fact that "the mode in which honorary degrees are conferred in this country is a sham and a shame." He proposed: (*a*) that the older and firmer colleges should refuse to give honorary degrees under any circumstances; or, (*b*) D. D. and LL. D. might be given, on examination, openly and honorably, with a thesis or treatise which should exhibit the candidate's attainments; or, (*c*) a college might declare its purpose to advance its own graduates to honorary distinctions on certain recognized principles of promotion.

2. Ex-President Woolsey, in the *Century* for July, 1884, declares "the desire to obtain the honor [of an honorary degree] is a desire which no man should indulge."

3. In July, 1881, the American Philological Association, meeting in Cincinnati, O., adopted the following resolution:

"WHEREAS, Many colleges in the United States have in

[1] A Report presented to the Annual Convention of Graduate Clubs, at Baltimore, December 29, 1896.

recent years conferred the degree of doctor of philosophy, not by examination, but *honoris causa;* be it

"*Resolved,* That this Association deprecates the removal of this degree from the class to which it belongs (namely, B. D., LL. B., M. D., and Ph. D., degrees conferred after examination), and its transfer to the class of honorary degrees."

After this protest was made, we are informed that Ph. D. was, nevertheless, conferred as an honorary degree by Princeton, Amherst, Michigan, Lafayette, Dartmouth, Hamilton, Madison, Union, Dickinson, Western Reserve, Wisconsin, North Carolina, De Pauw, and the University of the City of New York.[2]

4. In 1889 Charles Forster Smith, professor of Greek in Vanderbilt University, read a paper on "Honorary degrees" before the National Educational Association, and in it gave statistics from the Bureau of Education, and quoted largely from the recommendations of Presidents Gilman and Woolsey.

5. In the Report of the Commissioner of Education for 1889-90 the value of the Ph. D. is discussed, and statistics are given showing the number of colleges conferring it as an honorary degree. Colby University and Rock Hill College are quoted as strongly condemning the abuse.

6. In 1892 the EDUCATIONAL REVIEW, in an editorial, denounced the practice, and proposed to publish a list of the colleges that persist in this abuse, and also a list of the persons who receive and accept such a degree. To this the President of Ohio University replied that a large proportion of the college faculties in this country were opposed to granting honorary Ph. D., but that boards of trustees take the matter in hand, and grant the degree without consulting the faculty.

7. At the International Congress on Education, in Chicago, 1893, William O. Sproull, Dean of the University of Cincinnati, read a paper on the conditions on which the

[2] Charles Forster Smith, *Honorary degrees as conferred in American colleges* (Syracuse, N. Y. C. W. Bardeen, 1889).

degree of doctor of philosophy should be given. He would demand (*a*) bachelor's degree, (*b*) residence of at least two years, (*c*) presentation and acceptance of a dissertation involving original work. This dissertation, if accepted, must in every case be printed and bear the name of the professor by whom it had been accepted. (*d*) An oral examination in one major and two minor subjects, to be conducted by at least three professors. In a letter just received, Professor Sproull adds that he is now thoroughly satisfied that the degree should never be given *honoris causa*. The discussion at Chicago led to the appointment of a committee of six college presidents to correspond and co-operate with committees of other educational and scientific bodies to protect the significance of the degrees of Ph. D. and Sc. D. President Gilman, as chairman of this committee, informs us that the committee met once in December, 1893; but, as the congress that appointed the committee had disbanded, the committee was ineffective, and has done nothing.

8. At a meeting of Affiliated Clubs of Graduate Students, held in New York city April 23, 1893, an address was issued to the governing boards of American universities, emphasizing the importance of uniformity in the requirements for the doctor's degree, and deprecating the giving of honorary Ph. D.

The convention of graduate students, meeting in New York city April 16, 1895, adopted resolutions defining the conditions on which the doctor's degree in philosophy should be granted, and condemning the giving of the master's degree or the doctor's degree, either *honoris causa* or *in absentia*. These resolutions were published in the *Handbook of Graduate Courses* for 1895--96.

9. Four years ago the General Conference of the Methodist Episcopal Church constituted a board called "The University Senate," which controls courses of study, etc., of all colleges that are recognized by the Church. Their regulations on degrees are advisory only, but the "College Association of the Methodist Church" has adopted their suggestions. We are indebted for this information to Presi-

dent Samuel Plantz of Lawrence University, Wis. The following is the action referred to:

"*Resolved*, (1) That it is the sense of this body that the Ph. D. degree should not be given as an honorary degree; (2) that in order to become a candidate for the Ph. D. degree the applicant shall have taken the B. A. degree from a college whose curriculum requires four years of work in addition to the three years' preparatory work, beyond the English branches; (3) that the applicant shall be required to pass a preliminary examination in both French and German, showing that he has such a reading knowledge of these languages as shall make them serviceable in his preferred line of investigation; (4) that, in case the work is to be done in residence, the minimum of time be two years, and if done in part *in absentia*, the last year being resident, that the work *in absentia* should then cover a period of at least two years, and be done under such circumstances as will give the candidate access to libraries and other facilities for thorough work; (5) that the final test shall be a thesis which shall show original work, the examination before the faculty to be given only upon the condition that the thesis presented shows satisfactory work; and (6) that the postgraduate work done in the professional schools should not be credited in the period of working for the degree."

Adopted November 4, 1894.

10. For many years New York and Pennsylvania have been among the chief States conferring the doctorate in philosophy as an honorary degree.

	1888	1889	1890	1891	1892	1893	1894	1895
In whole United States	29	50	39	30	36	32	33	34
In New York and Pennsylvania	14	21	11	15	14	15	10	10

In New York, however, the law of 1892 put the control of these higher institutions completely under the Board of

Regents. They issue blank forms requiring full information as to degrees conferred and lists of all recipients of honorary degrees. In a letter recently received from Melvil Dewey, Secretary of the University of the State of New York, he says: "There is no question of the wisdom of our law, and we are beginning to reap the benefits. We take the names of all honorary degrees and publish them as they ought to be. No institution should confer a degree which it is ashamed to have made known. The requirements, of course, reduce materially the honorary degrees conferred, and remove much of the cause of criticism." On October 15, 1896, the Regents adopted ordinances defining the term college, prohibiting unauthorized use of the name "college," forbidding "cut-rate" courses in preparatory schools, and *absolutely prohibiting, after January 1, 1897, the granting of A. B. or Ph. D. honoris causa.* When it is remembered that New York, for the last eight years, has averaged over eight honorary Ph. D. degrees annually, or one-quarter of all granted in the United States, the importance of this action will be manifest.

In Pennsylvania, too, the period for honorary Ph. D. is probably almost closed. During the last eight years the State has averaged over five honorary doctors of philosophy annually. There are in the State no less than one hundred and twenty institutions empowered to confer degrees. In 1895 the Legislature passed an act creating a college and university council, with full authority to decide upon the advisability of chartering new institutions. Hereafter no institution shall be chartered with power to confer degrees unless it has assets amounting to five hundred thousand dollars for the exclusive purpose of promoting instruction, and unless the faculty consists of at least six regular professors, who devote all their time to the instruction of its college or university classes. No baccalaureate degree in arts, science, philosophy, or literature is hereafter to be conferred on any student who has not completed a college or university course covering four years. The council have just adopted a report on uniform entrance

requirements, obligatory as minimum on all the institutions of the State. While Pennsylvania at present does not require the colleges to furnish lists of recipients of honorary degrees, the State superintendent, in a letter just received, states that he sees no objection to such a requirement, and believes it would help to check abuses.

11. The president of the University of Washington informs us that they "have an association of college presidents of the Northwest, one of whose objects is to lead to the more careful and conscientious use of academic honors."

The present is an opportune time to act in this matter. The vast majority of people concerned in higher education all over the country are heartily in favor of the protection of college degrees. In response to a circular of inquiry in regard to the granting of honorary degrees, out of a hundred colleges answering the circular only eleven failed to oppose most emphatically the honorary Ph. D. They say the practice is a farce. One college president writes very frankly that "Ph. D. was conferred on him without any sufficient reason." Another says that he "never was in favor of granting honorary Ph. D., and knows of no good institution that is." The eleven who fail to say No think that the practice has been greatly abused, and should be allowed very sparingly. The reasons given as grounds for the bestowal of the honor are remarkable for their indefiniteness. One college in Kansas granted it to two women for "conspicuous work, especially in a literary way." A New York college has been giving it to "skilled teachers." A leading Pennsylvania institution bestows it for "eminent attainments." Another college in the same State has been limiting it to professors and principals, while a third gives it for "meritorious scientific work"; and one in Ohio requires "eminence in philosophical pursuits."

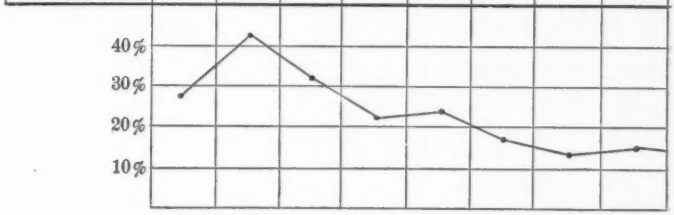
Several colleges avow their practice of bestowing LL. D. on the State Governors. In answer to the request for rules governing the granting of honorary degrees, several colleges sent regulations to be observed in the *formal application for such degrees by the candidates themselves*, and one college presi-

dent acknowledged that his institution had been so overrun by applicants that he advised the postponement of all and the appointment of a committee to draft rules. The grounds usually given for LL. D. are such uncertain qualifications as "scholarship and position," "distinction in science or letters," "valuable services," "distinction as a statesman," "general ability," and "general fitness." The degree of D. D. is granted for "distinguished church work," "meritorious scholarship," or "general fitness." One president says it is "a hard question to answer," and another remarks that the "rule is not very stringent." A. M. is being given as an honorary acknowledgment of "marked success of many years' teaching," "of ability as a preacher or writer," or "of sufficient prominence." One New England college granted it to "an old lady in Vermont, an old teacher and an efficient worker in the cause of temperance," while another leading college says that it gives the degree "to a citizen or benefactor, not literary, whom the university desires to honor."

The colleges for women throughout the country have set a good example in refusing to confer honorary degrees. Very few have at any time been guilty of the practice. Nor is it the weaker institutions of the West and South that have abused the privilege. On the contrary, the abuse has been most prevalent in New York, Pennsylvania, and Ohio, with occasionally a spasm of inflation in New Jersey and Illinois, and in 1895 the fever struck Maryland, Alabama, and Indiana.

Referring to the charted curve showing the ratio between Ph. D. degrees given *honoris causa* and those given on examination, we find that the ratio is gradually, but almost uniformly, decreasing—in 1884--85 being but little more than one-third what it was in 1889. This indicates that the degree is coming more and more to stand for work done under university conditions. The figures are taken from the Commissioner's reports, and, under the admirable system Dr. Harris has introduced, the statistics seem encouragingly reliable. Occasionally the practice in Germany is referred

NUMBER OF PH. D. DEGREES GRANTED IN U.S.	1888	1889	1890	1891	1892	1893	1894	1895
ON EXAMINATION	106	121	125	136	152	189	233	234
HONORIS CAUSA	29	50	39	30	36	32	33	34
RATIO HON. PH. D. / EXAM. PH.D.	27%	41%	31%	22%	24%	17%	14%	15%



to as creating a precedent for granting the degree *honoris causa;* but in the same year (1892) in which the ratio of honorary degrees, as shown above, was 24 per cent. in the United States, it was less than 1½ per cent. in Germany.

The following resolutions, embodying the recommendations of the committee, were adopted by the convention of graduate students held in Johns Hopkins University, Baltimore, December 29, 1896:

"*Resolved,* That it is the sense of this convention:

"1. That it is inexpedient for any institution to give the same degrees *honoris causa* as it grants in regular course on examination.

"2. That in every case the reason for bestowing an honorary degree should be openly avowed, and should be stated in the programme of the commencement exercises and in the annual catalogue.

"3. That bachelor degrees are inappropriate as honorary degrees or *ex gratia,* and should be made to signify always the completion of a recognized grade of undergraduate work in their respective departments.

"4. That the master's degree should never be granted except for resident graduate study of at least one year's duration, tested by adequate examination.

"5. That the minimum requirements for the degree of

doctor of philosophy shall be as follows: (*a*) The previous attainment of a bachelor's degree or its equivalent; (*b*) the completion of at least two years of resident graduate study, not more than one year, however, to be required in residence at the institution conferring the degree; (*c*) adequate examinations and a thesis embodying the results of original research; such thesis should bear the written acceptance of the professor or department in charge of the major subject, and should be accompanied by a short biography of the candidate.

"6. That the degrees of Ph. D., Sc. D., M. D., and Pd. D. should never be given *honoris causa* nor *in absentia*. L. H. D., S. T. D., D. D., LL. D., D. C. L., and Mus. D. are recognized as honorary degrees."

The following recommendation of the committee was referred to the Board of Editors of the *Handbook*, with power to act:

"That the Editor-in-chief of *Graduate Courses* should be directed to publish each year in the *Handbook* a list of all recipients of honorary degrees from the institutions represented in the *Handbook*, together with the grounds on which such degrees were granted; likewise to publish a list of all the recipients of regular Ph. D. degrees, together with the titles of their theses and the names of the professors approving them."

The two following recommendations of the committee failed to pass in the form in which they were presented, viz.:

"*Resolved*, That it is the sense of this convention:

"1. That it is unbecoming for an institution to grant honorary degrees to any of its own members, whether students, faculty, or trustees, or to anyone whatever who applies for them.

"2. That no institution should confer a degree of a higher grade than the degrees to which the facilities of study offered by it directly lead."

H. T. Lukens

Bryn Mawr College,
Bryn Mawr, Pa.

III

THE PROFESSIONAL TRAINING OF TEACHERS FOR THE HIGHER SCHOOLS OF GERMANY

1 *Examination and Certification*

Teaching has been a profession in Germany since the close of the Napoleonic wars. The first decade of the century marks the turning point from the old régime to the new. Up to that time the teachers had been either novices awaiting holy orders or one-legged veterans unfitted for further military service. At least such instances were sufficiently numerous to give the impression that the schools were philanthropic institutions, designed chiefly to afford employment to those who might otherwise become public charges.

Early in the seventeenth century Ratke and Comenius had urged the necessity of having trained teachers in the schools. In 1707 Francke established the *Seminarium selectum præceptorum* in Halle—the outgrowth of several years of trial in the training of teachers; and under his influence more than a thousand *Volksschulen* were created in Prussia by Frederick William I., and placed under teachers nominated, as far as possible, by Francke himself. Under Frederick the Great the policy of securing trained teachers for the elementary schools was adhered to, and teachers' seminaries became a necessary part of the public-school system. The next important step was taken in 1763, when Frederick the Great ordered that all teachers should be required to pass a state examination in certain specified subjects, and that only those persons who had been trained in the Berlin Seminary should be eligible for appointment as teachers in elementary schools supported by the crown. It is certain that the regulations of Frederick the Great made

a great advance in the condition of the public schools and in the position of the teachers; but, so long as there were non-public schools, many of them entirely removed from government influence, whose teachers were appointed by the Church or private partrons, there could be no standards applicable to all. It was the *Allgemeine Landrecht* of 1794 that finally declared all schools to be state institutions, and at all times subject to the inspection and examination of the state.

The complete secularization of the secondary schools followed tardily after the emancipation of the elementary schools from ecclesiastical control. Applicants for positions in the higher schools were required to show their fitness by examination or otherwise even prior to 1790, but the clergy still maintained the upper hand. In 1779 Frederick the Great struck the first serious blow at clerical influence; he decreed that henceforth "philosophy should be taught in the higher schools only by laymen." All during the century able schoolmasters had been trained in the *Seminarium* in Halle, and they were men of influence in the state. Many students of Göttingen, between the years 1735 and 1775, fell under the spell of Gesner and Heyne, and thereby grew into enthusiastic teachers of the classics. Indeed, the *Zeitgeist* of the last half of the eighteenth century was decidedly helpful in promoting an interest in the work of the classical schools for its own sake, and just as the work of the schools was appreciated for its own sake did the social rank of the teachers rise in importance. But still it was lamentably true that the examination for teachers' certificates was the examination for holy orders.

The death of Frederick the Great, in 1786, left many of his plans for the improvement of the higher schools unfinished. His successor, however, established in the first year of his reign an *Oberschulkollegium*, which was given the supervision of secondary education in the kingdom. A year later, in 1788, it was decreed that students should take a final examination on leaving the *Gymnasien;* in 1812 the requirement was made obligatory and universal. In this way

the government ascertained the quality of secondary-school work, but students might enter the university and study for the learned professions whether they passed this examination or not. Indeed, not till 1834 was it finally settled that the certificate of graduation from a higher school was an essential prerequisite for admission to the university and eventually to the professions and the higher grades of the civil service.

By the establishment of the *Oberschulkollegium* the Church was deprived of some important prerogatives; still others were taken away by the *Allgemeine Landrecht* of 1794; but the complete emancipation of the teacher from ecclesiastical control was secured in 1810 by an order requiring of all intending teachers in the higher schools an examination separate and distinct from the examination for admission to holy orders. However easy the step might be for a theological student to become a higher-school teacher, yet it was a step that he had to take, and he had to take it just as other candidates did—by examination before a board of teachers. Then teaching became a profession, and the teacher a highly honored member of the civil service. Every subsequent enactment has been to increase the dignity of the profession and to make its honors more difficult of attainment. Every decade has seen some additional requirement made of those who would enter the ranks; and with every decade there have come increased emoluments and social advantages of a nature to invite service. The result is the best equipped and most exclusive body of teachers in the world.

One of the striking peculiarities of German social life, as viewed from the American standpoint, is that the average boy in his teens, or even earlier, knows precisely what his life work is to be. Long before he leaves school he begins to shape his course for the profession that he has in view; indeed, it is probable that the most important decision of his life is made when he enters school at nine years of age. And with each succeeding school year the range of possible choices steadily diminishes. It is important, therefore, that

parents early decide upon the course of study best suited to their children, and that the children themselves fully realize the bearing of their school work on their subsequent careers.

The student of the Gymnasium knows that he has the privilege, among others, of preparing himself for any position in the higher schools; the graduate of the Realgymnasium may become a teacher of the modern languages, mathematics, or the natural sciences; and but recently the privilege of becoming a teacher of mathematics and the natural sciences has been conferred on graduates of the Oberrealschule.

The professional training of the higher-school teacher really begins with the university course. Although graduation from a higher school is an essential prerequisite, it is only in the university that he gets the special training required of all candidates for positions in the secondary schools. The minimum course in the university, as required in most German states, is set at three years; but four or five years are nearer the average. The student, on coming up to the university, knows full well what profession he is to follow, and the intending teacher has his specialties already in mind. In general the greater part of his work is directed to those subjects which he expects to teach, or, better, to those subjects in which he will later be examined. But there is no prescribed course which he is bound to follow. For a year or two he follows his own personal inclinations without overmuch thought of the future—sometimes without overmuch attention even to the present. In time, however, he falls into the routine which invariably marks the preparation for the state examination.

The *Staats-Examen* is the sole test of a candidate's preparation for any professional career. Neither the degree of doctor of philosophy, nor any other scholarly distinction, can exempt him from the necessity of proving himself before a state board of examiners. In the smaller German states these boards are generally located at the capital, or in the university towns; some states have none at all, having delegated their prerogatives to the boards of adjoining states.

Prussia maintains ten examining boards for the higher-school service, called *Wissenschaftliche Prüfungs-Kommissionen.* The majority of the members of these boards are university professors; but there are usually a few prominent secondary-school men and administrative officers of the Department of Education among the members. They are appointed annually by the Minister of Education, but in practice there are few changes for years together. There is no prescribed number of members, except that there must be at least one examiner for every subject that a candidate may offer; this means, as a rule, from twenty to thirty persons.

The aim of the state examination is to test (1) the applicant's proficiency in pedagogy and philosophy—including psychology, logic, and ethics; (2) his familiarity with the German language and literature; (3) his acquaintance with the doctrines of his religion, and (4) his knowledge of the subjects which he expects to teach. In all these lines, possibly excepting religion, he will have had special training under university professors. In philosophy and pedagogy, in German and in religion, the requirements are of a general nature intended to disclose the applicant's breadth of training and the nature of his religious faith; it is the fourth requirement that constitutes the crux of the examination.

A certificate based upon the state examination does not by any means permit the holder to teach what he will anywhere he gets the chance. Under the Prussian system, a teacher, in addition to the requirements above mentioned, must be qualified in at least four subjects, or their equivalents, and he must not presume to teach anything in which he is not properly certificated. Furthermore, he may not teach those subjects in which he is certificated beyond a certain class, that class being determined by the grade of his certificate. Three grades are recognized; these correspond to the three general divisions—upper, middle, and lower—of the higher schools. A first-grade certificate in any subject is good for any class in a nine-year school; a second-grade is good for all classes below the three highest; a third-grade is good only for the lower classes. Third-grade certificates

are granted only in those subjects which are taught in the higher schools the full nine years. Thus, in Latin, German, French, religion, history, mathematics, and geography, certificates may be of the first, second, or third grade; in Greek, English, Hebrew, Polish, Danish, physics, chemistry and mineralogy, botany and zoölogy, of the first or second grade. Applicants for certificates may enter, under certain restrictions, for any subject and any grade in that subject.

The subjects which are taught in the higher schools—therefore those in which state examinations may be taken—are classed in two general groups: the language-history group, and the science-mathematics group. The former includes German, Latin, Greek, French, English, and history; the latter includes mathematics, physics, chemistry and mineralogy, botany and zoölogy; geography of the first or second grade may be classed in either group. Hebrew, Polish, Danish, and religion are extra subjects properly belonging to the first group. Of the four subjects in which every teacher is examined, the first two are known as majors (Hauptfächer), those which he prefers to teach, the other two are called minors (Nebenfächer). Now in order that the most favorable combinations may be made—favorable both for the schools and the teachers' scholarship—certain restrictions are placed upon a free choice. The most important are the following: (1) Both majors and one minor must be of the same group; (2) first-grade Latin goes with second-grade Greek, and second-grade Latin with first-grade Greek; (3) first-grade mathematics takes second-grade physics; (4) third-grade Latin is required with any grade of French or English; (5) third geography must be taken with any grade in history; (6) a major in religion takes Hebrew as its accompanying major. Geography, placed, as it is, in both groups, is always a popular minor; it may also be counted a major in either group.

The university student who looks forward to teaching as a profession early selects the combination of subjects which he prefers to teach, or which is likely to bring most rapid pro-

motion. To these subjects he gives his main attention for three to five years. If he can afford the luxury of taking his Ph. D.—it costs from one hundred to two hundred dollars and a good deal of time—he will, in the meantime, write a dissertation and be examined on three of his four subjects. That the degree is looked upon as a luxury—and one that can easily be dispensed with—is evidenced from the fact that less than one-half of the Prussian teachers have taken the pains to secure it. The *Staats-Examen* is not only more difficult, but more honorable because obligatory.

There are in Prussia ten State Examination Commissions,[1] located in the university towns. An applicant for examination cannot come before any of these at will. He must choose the Commission, (1) of the province in which he was born or in which he resides, or (2) of the province in which the university is situated where he has spent at least two semesters, including the last, or (3) of the province in which he expects to teach. All foreigners, including residents of other German states, must secure the indorsement of the Minister of Education to their application.

The application itself is a serious affair. First there is the fee to be paid, which amounts to $7.50 (30 M.) for each examination and re-examination; $3.75 (15 M.) for each supplementary and extension examination. Then there are the certificates and testimonials of the applicant's higher-school course and his university training, without which no one can hope to be admitted unless by special order of the Minister. These papers show precisely what he has done and how well he has succeeded since he entered school at nine years of age. Next he makes known his combination of subjects which he elects as majors and minors and the grade of examination which he desires in each. In his *Vita*, which is next in order, the applicant tells who he is, when he was born, what the rank or occupation of his father is, of what church he is an adherent, and, finally, he calls attention

[1] East and West Prussia, at Königsberg; Brandenburg, at Berlin; Pomerania, at Greifswald; Posen and Silesia, at Breslau; Saxony, at Halle; Schleswick-Holstein, at Kiel; Hanover; at Göttingen; Westphalia, at Münster; Hesse-Nassau, at Marburg; Rhine province, at Bonn.

to special points in his preparation and any noteworthy work that he may have done. This sketch of his life must be written in Latin, if the applicant's major subjects are the classical languages; if they are the modern languages, it must be in French or English; in all other cases it is optional whether it be in German or a foreign language.

After review of the application thus made the Commissioners decide upon admission to the examination. If the applicant's preparation seems faulty, they advise him not to attempt the examination; if they have serious doubts as to his moral character, if they suspect him of being disloyal in religion or politics, they may refuse his application altogether, in which case an appeal may be taken to the Minister—if the applicant doesn't mind courting almost sure defeat; if his credentials are acceptable, however, he is soon notified when to appear for examination.

The examination is both oral and written. The written test comes first and consists in the writing of elaborate essays on themes assigned by the Commission. One theme is on some topic in philosophy or pedagogy and is designed to test the candidate's knowledge of the philosophical basis of pedagogy and didactics, and of the development of educational thought since the sixteenth century. The applications of modern psychology to teaching are fruitful themes for such essays. The candidate must also write essays on themes selected from each of his major subjects. When one essay will include both major subjects, the two may be combined, as frequently happens in classical and modern philology, physics and mathematics, history and geography, etc. If the applicant has published something of note, as, for instance, a dissertation for the degree of doctor of philosophy, it may be offered as a substitute for one of the essays. Essays that deal with a classical language must be written in Latin; with the modern languages in French or English, as the case may be; and with all other subjects in German. Six weeks are allowed for the preparation of each essay, and the Commission is empowered to grant an extension of six weeks—mak-

ing twelve weeks in all, if necessary, on each subject. Any further extension must be authorized by the Minister.

At the expiration of the time allowed the essay is forwarded to the chairman of the Commission, together with a complete bibliography of references consulted, and a declaration by the candidate that he has received no personal assistance in the preparation of the essay. A false declaration would disqualify a candidate for further examination; if the fraud were not detected till after the certificate had been granted, disciplinary proceedings would be instituted as against any other state official. If the essays are not comprehensive enough to satisfy the Commission of the candidate's breadth of scholarship, supplementary tests may be required by way of short written examinations or laboratory work. Thus the candidate shows his familiarity with the literature of his subjects and demonstrates his ability to do independent work.

If now the written examination satisfies the Commission, and the candidate appears not to be an atheist or a socialist, a day is set for the oral examination. It is an open secret that few Jews reach this stage, no matter what their qualifications may be, and those who do succeed in overcoming all preliminary hindrances are, nevertheless, quietly disposed of at a later stage in a way to minimize their influence. The Prussian examination system, as actually conducted, is designed primarily to keep undesirable persons out of the profession; there are many requirements that would not be made if the sole object were to secure the best teachers.

The oral examination is intended to test the general culture of the candidate and his ready command of philosophy and pedagogy, and to ascertain his fitness to teach his chosen subjects in a higher school. The examination in each subject is conducted by a specially appointed examiner in the presence of other members of the Commission. Candidates for first-grade certificates in Latin or English, or for first or second grades in French, must use the respective languages in examination, at least to the extent of showing a

ready command of the spoken forms. Thus the candidate shows what he knows as well as what he can do.

The oral test concludes the examination. The Commissioners now decide whether the total examination has been satisfactory or not. If any part is unsatisfactory, no certificate is granted; but, instead, a testimonial is issued to the candidate, which specifies the exact results attained in each subject, the grade secured in all subjects that were passed, and the day (never within six months) when the candidate may come up for re-examination. The second trial is his last if he again fails to meet the minimum requirements.

The successful candidate not only receives a certificate of fitness to teach (*facultas docendi*) certain subjects in specified classes; but his certificate is ranked according to the grades he holds in the various subjects in which he is examined. A first-rank certificate, which renders the holder eligible at some future time for appointment to the position of head teacher with the title of Professor, indicates that the holder has secured upon examination either two majors of first grade and two minors of second grade, or two majors and one minor of first grade. A second-rank certificate, which entitles the holder to the position of ordinary teacher (*Oberlehrer*), indicates the possession of two majors and one minor of second grade and one minor of third grade. In other words, the person holding a first-rank certificate is entitled to teach (1) two subjects in all classes and other two subjects in the lower six classes, or (2) three subjects through all nine years of the higher schools. The second-rank certificate entitles the holder to teach three subjects through the first six years and one subject through the first three years. A certificate of the second rank, therefore, excludes the holder from teaching in the three highest classes of the higher schools and denies him the honor reserved for head teachers.

If the candidate has been successful in both majors, but has failed in his minors, he may be granted a second-rank certificate on condition that he secure by supplementary examination second grade in both minors or first grade in one.

Such deficiency must be made up within three years from the date of the first examination. Supplementary examinations must be taken before the same Commission as was the first examination, unless the Minister of Education gives the candidate permission to apply elsewhere. Only one such examination is permitted.

It will be seen that a teacher's chances of securing a position are limited (1) by the subjects in which he is certificated and (2) by the rank of his total certificate. An unfortunate combination of subjects often seriously interferes with the promotion of a candidate. It happens, therefore, that many teachers seek to qualify themselves in as many subjects as possible, and to secure the highest grades in each. Such persons are permitted to take two extension examinations before the Commissions by which they were first examined, or before the Commissions of the provinces in which they are teaching. The second extension examination closes the door on further opportunity. The limit is practically fixed at four or five first-grade certificates; few teachers, in fact, ever secure more than three. The only incentive to add to the number of privileges is that thereby an appointment may possibly be secured a year or two earlier. The game is hardly worth the candle.

2 *Pedagogical Training*

The intending teacher, even with his certificate in his hand, has yet other gauntlets to run. The certificate of itself confers no right to teach. Something more than general culture and minute scholarship is required. It is safe to say that Germany owes more to the pedagogical training of her teachers than to any other factor in their preparation. It is the professional spirit, which every German teacher feels, that differentiates him from his species in other countries, and this spirit is the result chiefly of his pedagogical training.

When the examination *pro facultate docendi* was first established in 1810, it was specified that all candidates should demonstrate their ability to teach by giving a lesson before

the examining board. This plan was soon found to be impracticable; few candidates could make a respectable showing. Afterward the trial lesson was given in private before a school-inspector, but even this was unsatisfactory. Consequently, in 1826, the Prussian government introduced the plan, which has since been adopted by all the German states except Würtemberg, of requiring all candidates, after the completion of the examination *pro facultate docendi* to spend a year as trial teacher (*Probe-Candidat*) in some approved higher school. The *Probejahr*, as we learn from a ministerial rescript of 1867, was intended to give the intending teacher an opportunity to familiarize himself with the duties of his future office, and to prove to the satisfaction of the school authorities that he had the practical ability requisite for a successful teacher. Candidates were expected to teach six or eight hours a week under the immediate supervision of the Director or head teachers of the school. Besides this, there were special requirements concerning the visiting of classes taught by the regular teachers, preparation of lessons, supervision of scholars, attendance at examinations and teachers' conferences, and participation in all the practical workings of the school.

The *Probejahr* proved in time to be insufficient for the demands placed upon it. Too many candidates were seeking appointment to the higher schools. Something had to be done to shut out undesirable persons, and at the same time to raise the standards of professional attainments. In point of didactic skill it was recognized that the elementary teachers trained in the normal schools (*Lehrerseminarien*) were distinctly superior to the teachers of the secondary schools. It was decided, therefore, to lengthen the term of practical training rather than to increase the scholastic requirements. Following the example of Hesse, it was decreed in 1890 that intending teachers in the higher schools of Prussia should have two years of pedagogical training instead of one. The last year was to remain much as before, and still to be known as the *Probejahr*. The first year of practical training, following directly after the state exam-

ination, was intended to bridge over the gulf between the university and actual school work. Candidates were to be assigned to *Seminarien*, where they might have the advantage of superior instruction in the art of applying the general principles of pedagogy—already studied in the university—to the practical problems of the secondary schools. The bulk of the work was expected to be theoretical, but always to be presented with a view to its practical application.

Such are the specific requirements at the present time of all intending higher-school teachers in Prussia: nine years a pupil in a higher school, four years of university study, one year in examination, one *Seminarjahr*, and one *Probejahr*. If to this we add the year of military service, which all able-bodied men must perform, we find that the minimum requirements demand seventeen years in preparation; it is oftener eighteen or twenty years. Only a few of the German states have as yet adopted the Prussian plan in introducing the *Seminarjahr*, but where Prussia leads the others are sure to follow—if only at a respectful distance.

The Prussian *Seminarien*, to which candidates are assigned on passing the examination *pro facultate docendi*, are of two kinds—(1) those under the immediate direction of the Provincial School Boards, twelve in all, two in Berlin, and one each in Breslau, Göttingen, Königsberg, Magdeburg, Stettin, Posen, Danzig, Cassel, Münster, and Coblentz; (2) those instituted by ministerial rescript of March 15, 1890, which are connected with the leading Gymnasien and Real-gymnasien, and are each under the direction of the Director and one or two associated head teachers of the school.

The *Seminarien* of the first class are state institutions on special foundations, many of them having a specific purpose, as the training of teachers of religion, of modern languages, etc. These royal *Seminarien* admit few candidates, and, as a rule, all members receive valuable stipends. The twelve institutions together do not have more than seventy members, but all are picked men.

For some time prior to 1890 the average number of candi-

dates for the *Probejahr* in Prussia had been over five hundred annually. Since the introduction of the *Seminarjahr*, however, the number has steadily decreased. In 1894-95 there were only 192 persons in the *Seminarjahr* and 212 in the *Probejahr*. Hence only about thirty gymnasial *Seminarien*, of the seventy that were planned, have been needed. These, as above stated, are under the direction of principals of higher schools, who are relieved of about one-fourth of their regular teaching in order that they may have time for this work.

During the *Seminarjahr* two main objects are kept always in view—a clear understanding of pedagogical and didactic principles, and an introduction to the practical workings of a higher school. Once a week the *Director* leads a discussion on some pedagogical topic with a view to a better understanding of its practical application to teaching. The members of the *Seminar* meanwhile are observing the teaching of various masters, and after the first three months are themselves permitted to give two or three lessons a week. The *Director*, or some member of the faculty delegated by him, hears all these lessons and guides the young teachers' work. From time to time special lessons are given, which are attended by all the members of the *Seminar*, the Director, and his associates. The teacher presents the lesson according to a previously prepared outline, copies of which are in the hands of the critics during the progress of the lesson. Then comes the criticism, in which the teacher first gives his views of his own work, followed by the other members of the *Seminar;* the Director sums up the discussion, and points out possibilities of future improvement. Throughout the year the young teachers are instructed in the use of special school apparatus, books, and other teachers' helps; they attend all faculty meetings, have a share in the oversight of pupils, and are inducted into the mysteries of the final examinations. Three months before the close of the school year each member of the *Seminar* hands in a dissertation on some subject closely connected with his previous work. The Director thereupon makes an exhaustive report to the

Provincial School Board of the year's work, in which the abilities of the various candidates are passed in review. On the basis of these returns and the records of the examination *pro facultate docendi*, the inspectors (*Oberschulräte*) advance the candidates to their *Probejahr*, or refuse altogether to give them further training as men unfitted for the teacher's profession.

Of the noted institutions of Germany designed for the training of teachers for the secondary schools may be mentioned the University *Seminarien* of Jena, Leipsic, and Giessen. The first named is well known in this country from its Director, Professor Rein, and bears a deservedly good name at home because of the progressive schoolmasters that it has sent out. Unfortunately, however, its influence is more on the side of elementary education; the training school, which is also under the direction of Professor Rein, is composed of folk-school pupils; and the practical problems that come up for discussion are almost invariably the problems of the lower schools. It cannot be said, I think, that the Jena *Seminar*, at least under Professor Rein's administration, has exercised any great influence on the secondary schools. Nevertheless the general pedagogy that is so ably presented there is now being utilized indirectly through the medium of a gymnasial *Seminar* of the Prussian type, which has been recently established in connection with the Jena *Gymnasium*. In this way intending secondary-school teachers can avail themselves of Professor Rein's lectures and all the general discussions of the University *Seminar*, and at the same time keep in touch with gymnasial affairs, and give practice lessons under the direction of Dr. Gustave Richter, Director of the Gymnasium.

The *Seminar* in Leipsic is only remotely connected with the university. It is under the direction of Dr. Richard Richter, who is both Director of the royal Gymnasium and professor in the university. The candidates do their general work in the university, and come to the Gymnasium for training in practical lines. It has only a one-year course, and, inasmuch as its members are in preparation for positions

in the higher schools of Saxony, the *Seminar* has little influence beyond the kingdom.

It is somewhat different with the *Seminar* at Giessen. From its beginning in 1876 it has been under the leadership of Dr. Hermann Schiller, who is at once Professor of Pedagogy in the university, Director of the Gymnasium, and Oberschulrat of Hesse. It is the pioneer institution of the modern type, and has given direction to the recent development of the Prussian gymnasial *Seminarien.* Schiller's *Handbuch der praktischen Pädagogik* and his *Geschichte der Pädagogik* indicate the scope of the work. By means of lectures, discussions, and dissertations the way is prepared for the practical application of the principles of psychology and ethics. Every problem is a problem of secondary education, and every member of the *Seminar* is in training for the secondary schools. An unusual amount of work is required of the *Seminar* members, but, so far as I can judge from a short visit, it is done fairly well. It is evident, however, that better financial support would work great improvements. But in theory Schiller's *Seminar* is far and away ahead of any institution in Germany designed for the training of teachers for the secondary schools. It comes near being a model school of pedagogy.

The honors of leading the recent movement in Germany for better pedagogical training are about equally shared between Dr. Schiller and the late Dr. Frick of Halle. The former was the pioneer; but in 1881 Dr. Frick reorganized the *Seminarium Præceptorum* of the *Frankesche Stiftungen,* and became at once a recognized leader of pedagogical thought in Prussia. Since his death, in 1892, the *Seminar* has been conducted by his successor, Dr. Fries, on the Prussian gymnasial plan.

The *Probejahr,* as I have already indicated, has not been much affected by the introduction of the *Seminar* training. As heretofore, the candidates are told off in pairs for service in the larger schools. Their work is mostly class instruction, under the guidance of older teachers. Besides the six or eight hours a week of teaching, they may be called upon for

a certain amount of supervision; they must attend all faculty meetings, and otherwise identify themselves with the life of the school. For all this they receive no remuneration whatever; but, on the contrary, if their work is not acceptable, they may, on report of the Director, be dismissed from the service. But if their record is satisfactory at the end of the *Probejahr*, their names are inscribed on the list of teachers eligible to appointment in the higher schools of the province. Their period of probation is finished; they have only to wait a few years before beginning their life-work. This work, once begun and attended to with reasonable diligence, will insure them a competency for the rest of their days. It is a slow process, but sure. The end, however, is a desirable one both for the teachers and for the state.

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IV

REFORM OF COLLEGE ENTRANCE REQUIREMENTS

Some people affect to believe that this subject does not merit the study and discussion which, since the Buffalo meeting, has been given to it in every educational association within the national domain. Such persons do not sympathize with constant interference with courses of study; they deprecate the prevailing spirit of unrest; they discourage, as impracticable and visionary, the plan to adjust, harmonize, and bring into logical relations the different departments of our national system of education; the doctrine that advancement to higher and better things comes through the process of evolution, and that this process is aided and accelerated by ceaseless agitations, is not of their creed. They are neither iconoclastic nor constructive in their habits of thought; they dwell in the past; their genuflexions are at the altars of tradition; what was coin current in the scholastic marts of yesterday is an all-sufficient exchange for to-day; the matter and methods of the past have been potential in producing great men who have cut the gordian knots, explained the riddles, and solved the problems of man's highest good, and therefore the future is safe, and it is not wise to extrude any of this matter, to change any of these methods, or to experiment with the modern and the new.

Let the colleges dictate to the secondary schools; let the secondary schools bow before these great I Ams in the realm of thought. What has been can be. Let the history of the past be the wisdom of the future.

I am not in sympathy with this self-satisfied, restful, do-not-agitate educational spirit, nor will this spirit prevail, although worshipers at tradition's altar are necessary in

the march of progress to prevent undue haste on the part of idealists, agitators, reformers. There are many who believe with Wendell Phillips that "the man who sets on two feet a startling fact, and bids it travel from Maine to Georgia, is just as sure that in the end he will change the government as if to destroy the Capitol he should put gunpowder under the Senate chamber."

There are those who know, as they have seen the wrecks along the shore of their experience, that our grammar-school courses of study need enrichment and abridgment; that secondary schools should adjust their instruction to the one great purpose for which they are maintained; that the colleges must ally themselves to that which is just and right in their demands; that we must have better teachers in all schools, higher and lower; that supervision must be closer, sympathy with child life nearer the Divine; and that there must be a disposition on the part of those who are studying this, the greatest question of the age,—viz., the education of youth,—to sink self, to dwarf non-essentials, and in the very largest sense to exalt humanity. I would be enrolled in this class, with full faith that that which ought to be will be.

The question of college entrance requirements is not so vital to the college as to the secondary school. The colleges therefore have been conservative, measurably indifferent, slow to act, unmindful of the difficulties with which a lower order of beings were contending in their efforts to satisfy the guardians of the Ark of the Covenant. The secondary-school men, however, have been aggressive, conscious of their limitations in the molding of the material provided them, and ever ambitious to round out the lives of those who must of necessity end their school career with them, and to inspire all others to delve deeper that they may climb higher in the accomplishments of the limitless possibilities of human genius and human learning.

It is, of course, true that in historical sequence educational institutions have been developed from above. The higher have given rise to the lower.

Nearly one hundred and fifty years after the establishment

of Harvard a Massachusetts town was indicted for voting not to be at any expense for schooling girls.

Early in this century, in her little school in Middlebury, Vt., Emma Willard called out a class for examination in physiology, and the whole audience, shocked at the indelicacy of teaching such a subject to girls, rose and left the room, and they were by no means called prudish people. *Tempora mutantur, et nos mutamur in illis.*

This growth from above, however, was not from college to public school, but from college to private school and the endowed academy. Higher education, indeed all education, was for the rich, the aristocratic, for those who wrapped their cloaks about them and stood aloof from the madding crowd, the οἱ πολλοί who now reign in the republic, and demand equal advantages with those afforded the youth who are nursed with the gold spoon and play on Persian rugs. I do not decry private schools. They have done a great work, and they will always have a large place in the confidence of the community.

So long as the colleges looked to them for their students, so long could the colleges dictate what the preparation should be. Although the private school is restive under the necessity of preparing a class of boys to enter a half-dozen different colleges, with different and diverse requirements, nevertheless money will provide the means, and the private school, under protest, succumbs to the inevitable. Not so the public high school.

If I mistake not the signs of the times, the trend of public sentiment, and the absolute demand for a fair field and no favors to all classes, the public high schools are to be the most potent agencies in awakening an ambition among our young people for higher education, for college and university training. This, however, is not its primal mission. Its real purpose will, and always must be, to give the best equipment for life, which can be comprehended in a four years' course of study so plastic as to be adapted to the capacity and natural aptitude of the individual. It is to be the college of the people, with a curriculum rich in language, history,

mathematics, science, civics, and economics, and any and every study which makes for moral integrity and good citizenship. If a judicious selection from these studies, properly correlated, and continuously pursued, will not admit a pupil to any college, then the high-school graduate will either attend a State university or abandon a college career. There is neither menace nor malice in this statement. It is a fact which the conservative and tradition-loving devotees of higher education affect not to acknowledge, but which, in the near future, will be so thoroughly demonstrated that we shall marvel at that leaf of ancient history on which I have seen written, "When I entered college in 1850 no questions were asked me beyond those in Latin, Greek, and algebra."

I yield to no one in my appreciation of the benefits of language study. I believe it is fundamental to the ripest training, the broadest culture. Probably no instrument for the production of mind power has ever been devised by man equal to that of Greek, while the study of Latin is almost essential to the acquirement of such a rhetorical vocabulary as will enable one with facility to clothe his thoughts in felicitous and forcible language; yet the teaching history of thirty years has taught me, even to repentance, and every educator who is honest will vouch for the truth of my assertion, in his own experience, that to press Latin and Greek upon all students borders upon the criminal, and that the mathematical faculty is so nearly a minus quantity in the convolutions of the brains of many pupils that it is unwise to compel such to master any more than the mere elements of algebra and geometry, and cruel to deprive them of higher education in other directions because nature has been niggardly in its germinal equipments, mathematically.

A majority of those who will seek admission to college in 1900 will not have studied Greek at all; a considerable minority unfortunately, perhaps, will have omitted Latin; some will have had one modern language, some two; a few will have reveled in four foreign tongues, many will have struggled with but one, and that, too, under protest; some will have mastered solid geometry and trigonometry, and

others will have limited their mathematical knowledge to plane geometry; many will have devoted much time to a delightful study of physics, in a happy combination of the quizz and laboratory plan, one year, perhaps two years—five periods a week for forty weeks; others will offer a year of biology and a year of physics, or one year of chemistry and one of physics, or a year of physiography and three years of history—ancient and mediæval, English and American—or two years of history and one year of civics, or one of economics, and all will have studied the English language with becoming continuity, and made it a part of their acquisitions in the pursuit of every subject.

What are the colleges going to say to these students coming up from the North and the South, the East and the West, trained for four years in a public high school, whose course of study has been mapped out in accordance with the environments of the city, town, or village where it was located, which has responded to the demands of the homes or adapted itself to the boy who "knows what he wants" and who insists upon those studies which answer to the instincts of his nature, to the genius of a Divine implanting? Will they find still written over the doors, "Let him who enters here show his passport of Latin, Greek, and mathematics," or will they rather see, written with a pen dipped in the sunlight of newly revealed truths, "A warm welcome to all who, after their acquisitions from the common school, have had four years of excellent secondary instruction with excellent masters, in subjects which have been continuously pursued for at least one year"?

Contend as you may, argue as you will, the latter idea modified, harmonized with existing conditions which are ever changing, must prevail. It is the result of a century of evolution. There has been no revolution, and there is not a semblance of rebellion now in the spirit of the secondary schools. It is the outgrowth of republican institutions and of the spirit of democracy. It is individualism within a concentered government. It is liberty—not personal license, but liberty under the law of mental unfolding. It is the fiat

of the Almighty, the *Vox Dei*, which is the *Vox Populi*, that accepts no patent on educational values, except that of nature, heredity, and environment.

Only that knowledge which is assimilated and appropriated becomes real education. In the unfolding of the mental powers there must be garnered the largest possible amount of useful potential knowledge, which may be applied in the conduct of every business, in the success of every profession, in the amelioration of humanity, in the development of civilization, and in the blossoming of all those graces which are the crown of true citizenship in a government of the people.

The history of that which makes for success in life—and by success I mean the ability to obtain a sustenance, under conditions of self-respect and true contentment; the ability to rise above untoward circumstances, and win where the unskilled and the untrained lose—demonstrates the truth of President Eliot's position that "English, the modern languages, history, and the sciences can be made in secondary schools the vehicle of just as substantial training for the human mind as Latin, Greek, and mathematics," and having recognized the equal value of these subjects, new and old, and having learned how to teach them all with equal efficiency, it will follow, as the night the day, that we must have "options and wide options in admission requirements." That this is the trend of American education is shown by all the discussions and all the decisions of the present year.

As chairman of the National Committee on College Entrance Requirements it has been my duty and my delight, from my tower of observation, located where the pulse of public opinion beats the strongest, to keep the searchlight of my investigations constantly turning about the horizon, and it is marvelous, and inspiring as marvelous, to note not only the steady but rapid advancement of educational sentiment in the direction of placing this stone of eclecticism in courses of study at the head of the corner.

This movement, however, is not accelerated from the conviction that the result is inevitable, and therefore politic and expedient, but because it is wise, right, necessary, in order

that the annual sacrifice of victims in hecatombs upon the altars of fetichism may be abandoned, and that the largest possible number of young people, freed from the galling chains of an educational sectarianism, may be encouraged to secure the highest possible education along those lines which the Infinite has made discernible to the real teacher. One of the most distinguished educators in the country, writing me a few days since, says "The tide of right sentiment is flowing on so fast that one can almost see its progress week by week."

Harvard has been for years the national beacon, lighting up all avenues of research, and enabling students to come into possession of the "wisdom of the race," to use Commissioner Harris's favorite term, yet she has been maligned for adopting this principle of an early differentiation in studies, but "The living sap of to-day outgrows the dead rind of yesterday," and we have learned to pay homage to President Eliot for his unremitting efforts to free the colleges, and therefore the secondary schools, from a bondage that was precluding the possibility of the normal growth of a nation founded on the liberty of the individual.

It is a question, however, whether even at Harvard the classics have not been so buttressed as to make alternate options more difficult than they ought to be. No college must insist, in its admission exactions, upon more than a boy of average ability and good health, under proper instructors, such as the colleges give us, can accomplish in four years between the ages of fourteen to eighteen. Let the concentrated intelligence of wise educators determine what that shall be, along all lines of study, and with abundant substitutions, and the secondary schools of the country will meet the requirements and vouch for the results.

Cornell, in the far-seeing wisdom of President Schurman, has done a service to humanity which the secondary schools will not willingly forget, in "leveling up" all its requirements and placing A. B. at the goal of a successful career of study for four years. All hail, "Cornell! I yell! I yell!"

Vassar, the queen college for women, under the benign

influence of her erudite leader, has just announced to an applauding constituency that, hereafter, a full year of physics or chemistry, taught with laboratory facilities, may be substituted for the third foreign language by those who would enter her classic halls.

If the better colleges of New England and the Middle States can rise above the deeply-rooted influences of a century of conservatism, and come into harmony with the secondary schools, which are and must forever remain in close touch with the people, educating the young for whatever career Providence and their conscious powers may dictate, then surely the young and vigorous institutions of the West and South, not already entitled to leadership, will follow and rejoice to follow, and there will be in this country at the beginning of the twentieth century an American system of education, compact from the kindergarten to the postgraduate department of the university, complete in each division, harmonious in all its parts—a veritable *e pluribus unum* of scholastic privilege and opportunity.

This subject, College Entrance Requirements, which means the shaping of the curricula of our secondary schools so that they may do their work and fulfill their mission without thumbing the catalogues of a hundred colleges, and laboring in vain to keep in the same classes those who are going to college and those who are not, has been the all-absorbing theme of every educational gathering since July last. The New England Association, that of the Middle States and Maryland, of the North Central States, of the Southern States, the Harvard Teachers' Association, the National Superintendence Section, and a score of others, have brought to this discussion all their wisdom, have scanned the question from every side,—historically, psychologically, pedagogically,—and their good sense has brought them to such near conclusions that everyone, whose mind is not clouded with prejudice and befogged with tradition, can see the skies clearing and the sun of righteousness and justice beginning to dawn.

At the meeting of the North Central States Association of

Colleges and Secondary Schools, recently held, the executive committee presented four resolutions for discussion, the fourth of which, weighty with the odor of resurrected grave-clothes, was the following:

"*Resolved*, That in every secondary school and in college, as far as the end of the sophomore year, the study of language and the study of mathematics should be predominantly and continuously pursued; that the study of English, including grammar, rhetoric, and composition, should continue throughout every course; that two languages besides English should be studied; *and that no other studies should be allowed to interfere with the pre-eminence of the studies here designated.*"

The writer of this paper, believing that the interests of the individual rather than of the mass should be conserved; that the special talents of any student should be given abundant opportunity for their special development, uttered a most vigorous protest against the adoption of any such narrow chain-bound theory of education, and offered the following substitute:

"*Resolved*, That in both secondary schools and colleges, such courses of study should be provided as will offer to every student the best advantages, within reasonable limits, for the highest development of those talents with which he has been endowed, and that to this end studies should be arranged under the following heads, viz.: (1) language; (2) mathematics; (3) natural and physical science; (4) history and literature; (5) civics and economics, and, further, that while students should, in general, be encouraged to maintain a reasonable balance between these, the courses should be so plastic as to permit alternate options with a view to their adaptation to the individual capacities and purposes of students."

A large majority of the Association, and, notably, with possibly one or two exceptions, all of the representatives of the secondary schools, fresh from the difficulties which beset them, and fired with a commendable zeal for the highest welfare of their constituents, favored the substitute.

It was the last session; many had left, and courtesy dictated the reference of both the resolution and the substitute to the executive board.

Fairly arrayed against each other in these two resolutions were the past and the future, and to test the opinions of the representatives in the colleges and secondary schools of these twelve States, reaching from Ohio to Colorado, we sent a circular to the one hundred and fifty members, asking for a free expression of their preference.

While the publication of these replies would make an interesting chapter in the history of education and show what the great Northwest proposes to do, it will suffice for the nonce to say that one-sixth favor the resolution, one-sixth would modify both, and two-thirds are in hearty accord with the spirit and purpose of the substitute.

Such is the trend of educational thought, and although we must anticipate delays; protests, and Ossa piled upon Pelion by those who will still dare "To take up arms against a sea of troubles," yet it will require more than the faith once delivered to the saints to stay this tide of educational reform that is sweeping over the country.

The National Committee appointed at Denver, July, 1895, have incurred much personal expense, and given their study, thought, and time for two years to a consideration of this subject. They have collected data, and secured opinions and suggestions from every part of the country, and they confidently expect that the National Educational Association at Milwaukee will provide them means to bring their plans to a successful issue, and thus enable them to answer the imperative demand for a proper adjustment of the relations between the secondary schools and the colleges, without interfering with the primal purpose of the former to give the best possible instruction to those young people who will close their educational career in these schools.

The committee have secured the services of the Philological Association, which has selected a special committee of twelve, with Professor Seymour of Yale as chairman, to

submit model courses in Latin and Greek; the Modern Language Association of America has delegated to a like committee with Professor Calvin Thomas of Columbia, chairman, the arranging of model courses in French and German; the American Historical Association has taken up in earnest the matter of history requirements, with Professor McLaughlin of the University of Michigan as chairman of a special committee; the Science Department of the N. E. A. has in hand the preparation of like courses in the biological and physical sciences, under the direction of Dr. Palmer of the University of Colorado, president of the section; others are in charge of the requirements in mathematics, while delegates fom the several associations will present plans in the English.

The work done by these several bodies, specialists in their work, will be submitted to the National Committee, who will study, compare, arrange, and correlate these suggestions, and hope to submit their conclusions in an elaborate report to the country in 1898.

Never before in the history of the nation has there been awakened such an intense interest in educational affairs. The credit of the beginning is due to the magnificent Report of the Committee of Ten, and there is no doubt but that the wisdom of the colleges, united with the experience of the secondary schools, will bring about an amicable settlement of all impending difficulties, which will give rise to a revival of learning, and, further, in this land of freedom of thought and freedom of vocation, the very best interests of higher education.

A. F. Nightingale

Superintendent of High Schools,
Chicago, Ill.

V

THE RURAL SCHOOL PROBLEM

The National Educational Association has well vindicated its name in the national character of the problems to which it has applied itself, and the very practical results that are already seen. Two reports, one on secondary and the other on elementary education, have given the country the maturest thought of educators on the practical application of educational science to the work of the schools. And now, with the full influence of its authoritative announcement, it brings to the front a third; and in my judgment the most important as well as the most difficult problem, that of the rural schools. It is expected that the coming report of the committee will enlist the interest and the serious study of this question, not merely by those who are immediately interested, but by those whose broad sympathies and intelligence have contributed so largely to our present advancement.

The purpose of this paper is to introduce this subject preparatory to the report of the committee which will be considered at the July meeting of the National Educational Association at Milwaukee.

It is worth our while at the outset to consider whether there is a distinctive rural school problem in any other sense than there is a city school problem or a village school problem. Mere differences which require only modified adaptation of plans and principles are not sufficient to require distinct classification and separate treatment. And this we must first answer. The two reports, on secondary education and on elementary education, already made, are of universal interest and application. They are for the country as well as for the city. Mathematics, lan-

guage and science teaching, are without geographical or social limitations. Therefore, whatever problem there is deserving a separate discussion must be of practical administration due to peculiar social conditions. And these conditions we shall now consider.

The difference between town life and country life is not one of gradation, but of kind. The basis of the former is social; while the basis of the second is the soil. In the first, social interests, in co-operative industries, in intellectual, religious, and æsthetic provisions, make up the whole life. Out of this come the culture, improvement, and happiness that characterize town life. The people are in immediate contact with each other, through personal intercourse, through periodicals, newspapers, and books, so that no special attention need be given to dissemination of thought. The social organism has made each member one with the whole, and the light that shines shines for all.

It is needless to say that these are conditions not only favorable, but essential, to culture, to intellectual and moral progress. The city must be the center and source of the influences for good that reach men.

On the other hand, country life is held to and governed by the soil, by which I mean that the demands of the soil in tillage, as a source of livelihood and industry, condition the aims, taste, and culture of the people. Among the tendencies natural to an agricultural life are these:

1. It segregates the people. The cultivation of the soil requires them to live apart and to labor alone.

2. The problems that demand attention are problems of the soil, material. Hence, the thought and energy of parents and children are demanded to make the soil yield, and then to gather in the products. Mechanical skill is more necessary than general intelligence.

3. The power and disposition to social organization are not cultivated, and as a result the people are shut out from all those privileges and good things that have a social and co-operative basis.

4. It follows from all this that the country, with its segre-

gated life, must have far less of wealth in its various forms than the city or town, in which the co-operative industry increases individual skill and multiplies the results of labor.

Now observe how this life gives form to the education of the children of the country:

1. There being no social or industrial unit as a basis, the school district appears as only an aggregation of farms and families as circumstances suggest. The result is that a great number of these districts are too small for an economical administration. In States as old and rich as New York and Ohio from twenty-five to fifty per cent. of the schools have an enrollment of ten pupils or less. In this there is great waste.

2. There is an absence of a governing public sentiment such as in the city controls boards of even inferior character. School meetings are collections of individuals, and officers represent themselves rather than the people.

3. There is no high educational ideal. Social life stimulates culture. The soil demands sowers and reapers. The soil governs.

4. Accustomed to the independence of individual effort, the people refuse to delegate authority, even to gain the higher ends dependent upon organization. They wish to select their own teachers without limitations. They are restive under supervision. While no city would think of having schools without supervision, if rural schools were left to themselves the most of them would dispense with it. Hence, a low grade of teachers, frequent changes, short terms, and irregular attendance.

5. In an age when results are proportionate to co-operative and organized energy, it occurs that country districts are sure to have the highest school taxes and the most meager returns for expenditure, compared with the towns and cities.

In all this there is a distinct break between the towns and the country, and a condition that makes the rural school problem one by itself. The cause indicates what the remedy must be. The break is social, hence the remedy must address itself to the question how the life of the country can be

brought into vital contact and unity with the social life —intellectual, moral, and æsthetic—of the world at large. The country cannot evolve a civilization separated by this social chasm from the centers of thought and culture. History is one long record of high culture at centers surrounded by masses of serfs and peasants who for ages have been unaffected by the refinement of their superiors, and have developed no independent centers of their own, all because of the exclusive spirit of culture, which refused to extend itself in the spirit of Christian brotherhood and democratic freedom, and include the country as a part of society, entitled to its full share of the fruits of civilization, to which it has contributed far more than it has yet received.

The one and all-comprehending plan that will solve this problem, and make our rural schools a worthy part of our civilization, will be to introduce the ideal life of culture and character into them. Mark well, it must be *life*, culture and character incarnate; life, vitalizing, throbbing with energy, and quickening a kindred life in the souls with which it comes in contact; life, not machinery, not laws, not books, and not even money.

The world has long known this. To enlighten paganism we send noble men and women, the finest fruitage of a Christian civilization. To save the dark places of our cities, we establish our university settlements, to love and think and do in the very homes and walks of the submerged.

The country itself long since felt the same uplift when students of colleges went out into country districts for a winter's term of teaching.

Of course, all this means that the solution of the rural school problem depends upon the supply and support of educated teachers. The teacher is the only one who can carry the torch of elightenment and kindle the living light in the minds of others. He can form a new center within the district about which will gather new intellectual forces, and where will be solved the local problems of education in the light of the world's educational progress. He can unite the people in the support and improvement of their schools.

He can select the materials, adopt courses of study and methods of instruction. With teachers, efficient and enthusiastic, in the rural schools, we shall have a system with as many radiating centers as there are districts, instead of a few brilliant luminaries to penetrate the darkness from afar, by the aid of shadowy reflections of themselves in the routine and mechanical methods of untrained and uneducated teachers, that are kept marching among the schools on terms of short service and poor pay.

The teacher, then, is the substance of the problem. If the combined intelligence and influence of the coming national gathering can devise a plan by which a good teacher can be put into every school, the problem is essentially solved. All else will follow as the day the night. Yet there is nothing novel in this view. Since the days of Horace Mann, to go no farther back, this has been the theme of every reformer. But the difficulties have been so great that we have been disposed to abandon direct attack upon this key position, and to solve the difficulty by indirection, through text-books, courses of study, devices of apparatus, methods, and such an increase and simplification of educational methods as to make it difficult to engage one who could not teach school.

That this problem can be solved, and the country be given qualified teachers, appears in the histories of Germany, France, and of our neighbors in Canada.

Why then not in the United States? The difficulties are peculiar to our form of government. It is not that, even with present facilities, teachers cannot be secured. The supply is quite in advance of the demand. The principal hindrances are these:

1. There is no demand in rural schools for continuous service. The most of rural schools call for short terms of service, and for a part of the year. Hence, the only persons who can make such engagements are those who make teaching an adjunct to something more reliable.

2. The people of the country are accustomed to individual independence, without compromises that come from organization. Hence, they are restive under a system that takes

from them the right to say who shall teach their children, and what their children shall study.

3. The same spirit rejects a supervision that imposes restraints and substitutes the judgment of one man for the individual judgments of the many. This spirit asserts itself through all the forms of the school organization. Beginning with the county superintendent, he is commonly selected by party politics. As a political superintendent, he must represent the people. He must please them in the discharge of his duties—not in their better judgment, their deeper convictions, nor the views of the intelligent few, but the selfish impulses of the crowd. Of course, this strikes at the root of the whole system. There can be no efficient selection nor supervision of teachers, in which case the preparation of teachers need hardly be considered. Evidently the superintendent commands the situation, and nothing can be effected until there is provided a superintendency that is efficient in the selection of teachers, and in directing their energies effectively when in the schoolroom.

And here, when the effort is made to reduce the political element, and to increase the educational qualifications of county superintendents, they themselves stand in the way. The only way by which an educational qualification can be secured with the consent of the superintendents is to provide in the bill that all present incumbents shall be considered, *ex-officio*, qualified. It is freely admitted that there are many honorable exceptions; that many superintendents have, in spite of the system, maintained a high standing as educators, and have done great good. That these are the exceptions appears in their fewness, and in the fact that they represent invariably the more enlightened communities, in which public sentiment is disposed to select and support these efficient men.

Having this grave problem solved in an educational and efficient superintendency, the associated problems of the improvement of capable teachers in teachers' meetings, institutes, reading circles, and conventions will be a very simple matter. It appears, then, that our first problem is resolved into three:

1. How can there be secured to rural schools a superintendency that will conduct the office with professional fidelity and exclude the unqualified from the schools?

2. How may the preparation of teachers be extended to rural districts?

3. How can the rural schools be required to offer good teachers a reasonable compensation?

The second leading problem is how to gather the children under the conditions favorable to the object of the school and to the economical use of money. In the country there is no social or industrial unit which may serve as a basis of organized effort such as belongs to cities and towns. The primitive method has been that several families in a neighborhood, having enough property and children to support and employ a single teacher, organize into a school district. The schoolhouse must be within walking distance of every child's home. This limitation of distance very often makes schools too small for even one teacher, and always too small for anything like graded work with two teachers. Of course, all depends on making districts larger. In many of the Southern States, where the country outlying is practically the suburb of the city, the difficulty is not so great, for in such case the whole county is, or may be, in one district, and its affairs administered by the board at the center. But in most of our Northern States the democratic spirit insists that the authority be exercised in the immediate neighborhood, and under the eye of each patron of the school. For the care of children in the rural schools of Minnesota, we have an average of one school board to every thirty-six children, whereas in the independent districts we have one school board for every nine hundred pupils. Officers have no disposition to support a measure that will retire a majority to private life and put into other hands the management of their schools. Various plans have been adopted, such as township organizations with and without subdistricts; the consolidation of districts, with a system of carrying pupils to school when too far away to walk; and a third, of a county organization administered by one board.

The third is the financial problem, how to provide the money necessary for the support of an efficient superintendency and a corps of well-qualified teachers. Charity and benevolence do and give much for nothing, but they do not furnish a basis for a system of education. Neither can good teachers be so multiplied that discrimination will not be needed. The rural schools can only have good teachers by paying good wages. And that not by the month, but by the year. How, then, shall it be done?

Strangely enough, yet very fortunately, this financial element, while it is the motive power of the school system, is also the channel through which the influence of the state must make itself felt in solving the two problems already noted.

The sentiment prevails that our school system, like our political and our social life, is a unity in the rank of its parts, in interdependence, and in common interest. Each part is supported by the whole, not only in sympathy and advice, but in material resources. Hence, it being assumed that the children of the state are to be educated by the wealth of the state, we have to consider upon what conditions, and in what way public or state aid may be so afforded as to encourage and compel those who are in control to make all necessary provision for the conduct of good rural schools. Under a monarchical form arbitrary authority may impose the methods of the government, but under a democracy the disposition of the self-governing people must be moved. And nothing else has yet been found equal to the offer of financial aid to the people upon condition that they use reason and diligence in helping themselves.

The methods of applying this financial support and influence vary from Massachusetts to California. With the widest latitude in details the supreme aim must be to secure the most efficient administration of school affairs possible.

We have now named the three chief problems of the rural school question, viz.: 1. How shall an educated corps of teachers together with an efficient superintendency be secured? 2. How shall the pupils be furnished to the teach-

ers? and 3. How shall public aid be so given as to guarantee economy of administration and efficiency in teaching?

With the solution of these the multitude of other questions will be taken care of in the same natural order that governs in town schools. The results of discussion and the learning of the times will spread over the country through the teachers who keep in touch with the intellectual life of the age through conventions, summer schools, teachers' meetings, books, and periodicals. Then whatever is done for the world at large in the philosophy of education, in courses of study, in sanitation, in school architecture will be done for the rural schools.

This being a practical question, there remains the inquiry how to make the connection between the discussions of the National Association and the schools that are to be benefited. When reports were made upon secondary and elementary education the representatives of those schools were present by thousands, while thousands more were subscribers and contributors to the journals that published and reviewed them. But the rural schools will be far removed from this discussion, and the sentiment of the country will hardly be affected by what is said. Besides, rural schools are in State systems, and must be managed through the State legislature; hence whatever is effective must improve the whole system. This makes it far more difficult to move forward than in the case of city schools, where one and another can move on independently, its example becoming an incentive and guide to others.

Those who stand in the first position of influence and corresponding responsibility in giving this movement effect are the State superintendents of public instruction. They stand in the most advantageous position of influence, having the ear of the legislature and of the people. They direct the deliberations of teachers and county superintendents in conventions, institutes, and in publications and popular addresses.

The State superintendent who is heartily enlisted in the cause of popular education, and goes before his people with

plans of reform or improvement that are supported by the conclusions of this National Association, will do it at the greatest possible advantage. Next, and supporting the State superintendent, are those county superintendents and city superintendents who are located over the State, and although few in number, are men of broad views and active interest in education. Following these are all organizations of citizens for social reform, such as granges, farmers' unions, school meetings, newspapers, and periodicals, that are enlisted in the cause of popular education. All these being possessed with the idea that this is the problem of the hour, and giving themselves to its discussion in assemblies and in print, we shall see this greatest undertaking of the National Association successful in lifting this most important part of our school system to a higher plane of efficiency.

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FRANCIS A. WALKER, LL. D.

Died January 5, 1897

VI

THE EDUCATIONAL WORK OF FRANCIS A. WALKER

A graduating class of the Massachusetts Institute of Technology was dismissed by President Walker with the inspiring words:

> I cannot sufficiently congratulate you that you have taken the morning of life, while the heart is buoyant within, the limbs stout and active, and the air around fresh and fragrant, and the sun is yet low in the heavens, to make so strong and stalwart a beginning of your journey. I cannot believe that, as you pause on this eminence, here on your graduation day, and look back and down upon the camps of those who have not yet girded themselves for the march, but are still resting in the comfortable belief that it will do as well to begin life in earnest at twenty-one or twenty-five, you are at all disposed to regret your own early start and the manful exertions to which you have given the dewy hours of morning.

Of few, indeed, could such words have been spoken so truly as of himself, when, having won high distinction, first as a soldier, then as superintendent of the national census, at an age when most men have not passed the threshold of professional life, he became a teacher.

Rich as were his later years in loyal public service, whether as member of a city school board or of an international monetary commission, his true life-work was a fortunate blending of manifold forms of educational activity.

In the spring of 1865 General Walker, then but twenty-five, had recovered sufficiently from the effects of a Southern fever to lecture on political economy in his father's stead to the students of Amherst College, his *alma mater*. A member of that class writes that, while the results were not wholly satisfactory to the lecturer, the students "gained much of suggestion and inspiration."

From this brief apprenticeship he passed, in the same year, to the post of "middle-class teacher" in Williston Seminary

at Easthampton. His work was almost as varied as the curriculum of the school of that period, including Latin, Greek, and mathematics—the entire work of the junior class. He is said to have been a "forceful and successful teacher," taking great interest in his classical teaching, but caring less for the deductive methods of geometry than for induction from observed facts. There can be no doubt that this early experience in teaching was of the highest importance for his subsequent work in education, and that his conviction of the dignity and the great opportunities of the teacher's profession rendered subsequent return to it most welcome.

In the summer of 1868 his educational work was suspended by an engagement as chief editorial writer for the Springfield *Republican*, followed, shortly after, by several years of strenuous administrative activity at Washington, as Chief of the Bureau of Statistics, Superintendent of the Census, and Commissioner of Indian Affairs.

In 1872 the Census work, while still unfinished, no longer fully occupied his time; the Commissionership of Indian Affairs, difficult at best, was rendered doubly irksome by political conditions hostile to its efficiency. At New Haven, the Sheffield Scientific School, not hampered, indeed, but not greatly fostered by conservative Yale, had just lost Professor Gilman to become President of the University of California. General Walker was already known to several of the Sheffield faculty by association in the census work. The happy inspiration came to Professor Brush, then, as now, director of the school, to secure General Walker for the vacant chair. The inspiration was timely. Weary of the existing conditions of his work at Washington, but seeing no ready alternative, General Walker was delighted with the opportunity of escape from Washington to the congenial field open to him at New Haven.

This first direct connection with the then "new education" began at a fortunate period. A ferment of educational reform had existed for some time before the Civil War. More and more it was coming to be recognized that

matter and methods of college education, while conceivably well adapted to the training of ministers, doctors, lawyers, and even teachers—who would have little to teach but what their college required for admission—was lamentably inadequate for general higher education; that to the study of ideas must be added the study of things; that the study of books about things was but a hollow substitute for the study of the things themselves.

On the other hand the nation was awakening to the recognition of its great industrial future. Railroads were to be surveyed, bridges and aqueducts constructed, great manufactories built up. Men capable of leadership for the industrial armies were not lacking; but trained officers and engineers this army had not, save for the few graduates of West Point and of Troy and other few, educated, in some measure, in Europe. A keen sense of this great need led Professor Rogers to leave the University of Virginia to begin, at Boston, his crowning work for the foundation of the first great independent technological school; it led Joseph Sheffield of New Haven and Abbott Lawrence of Boston to contribute liberally to the scientific schools which now bear their names. Then, in 1861, all this activity was rudely interrupted; men's energies were absorbed by the stress of civil war. In 1865 reaction came. A vast, highly developed administrative and executive momentum was turned into the channels of peaceful industry. Colleges of a new type sprang up everywhere under the beneficent stimulus of the Morrill Act of July 2, 1862, for the promotion of higher education in the arts and sciences related to agriculture and the mechanic arts.

All these conditions made the Sheffield School, at the time of General Walker's accession, a focus of keen educational activity. Its democratic organization combined with its almost complete independence of the ancient college to inspire every member of its faculty with the liveliest interest in the solution of the new educational problems crowding upon it, and a high sense of responsibility for his own share in meeting them. The added stimulus of active antagonistic criticism from conservative quarters was not lacking. Any

man of open mind must have been profoundly affected by such influences. To one of General Walker's temperament and executive experience, his predilection for the concrete, and, on the other hand, his unequaled acquaintance with the great material needs and still greater material resources of the United States, these influences must have had extraordinary force in maturing educational convictions and thus determining his later career.

His teaching at New Haven was addressed mainly to the students of the so-called "Select Course," but as a member of the governing board he was brought into close relations with his colleagues of the technical departments, and had ample opportunity to become familiar with the general outlines of the work of the school.

From a scholarly standpoint these years at New Haven were invaluable. But little over thirty, he had done in a single decade work of the highest responsibility, that might well have taxed the mature powers of a strong man. Now at last he began to have something of that leisure without which thorough scientific work of any kind is impossible. He could classify and co-ordinate the acquisitions of former years, filling in gaps, strengthening weak points and developing strong ones, and in general enriching his mind with the abundant stores upon which he should later draw so freely. The literary productivity of this period continued with little or no diminution during his life in Boston, when leisure for prolonged study had long been denied him.

The publications of his New Haven period—1872 to 1881—include, besides numerous essays and addresses, *The Indian question* (1874), the great *Statistical atlas of the United States* (1874), *The wages question* (1876), *Judges' reports of the Centennial Exhibition at Philadelphia* (1877-78), *Money* (1878), *Money, trade, and industry* (1879), and three annual reports as Superintendent of the Census of 1880. The entire list includes little or nothing on distinctly educational subjects which afterward became so prominent. The census work and that at Philadelphia occasioned more or less protracted absences from New Haven.

In September, 1877, General Walker was elected a member of the New Haven Board of Education, becoming, also, chairman of the building committee. The only business other than ordinary routine with which he appears to have been identified was in connection with the question of omitting religious exercises in the schools. In February, 1880, finding it no longer possible, on account of the new census, to give the board the same close attention as previously, he resigned membership. He was also a member of the Connecticut State Board of Education from 1878 to 1882.

In the midst of the labors of his great census of 1880, General Walker was called to the presidency of the Massachusetts Institute of Technology in his native Boston. President Rogers had already lived a full life of usefulness when his plans for the foundation of the Institute of Technology, patiently matured through many years, finally reached fruition with the opening of the School of Industrial Science in 1865. But, in spite of doubtful health, he was granted more than a mere outlook upon "the promised land." Until 1868 he continued to build upon the structure he had planned. Yielding burdensome cares for a time to his close associate, Professor Runkle, he was yet able to resume the leadership in time for the great final service of choosing his successor. Much depended upon the choice. The years of his retirement had been darkened for the schools by trials and difficulties. The number of students, after steadily increasing to 348 in 1872-73, had fallen, six years later, to 188. Of the friends of fifteen years earlier some were disheartened, some were dead. The graduates were few—barely 200 up to 1878—and not yet of great reputation. Harvard College, so justly strong in the community, had called away members of the faculty, one to be its president, and had even proposed a consolidation which could end only in absorption. The very existence of the Institute seemed for a time in peril. Steadfast courage in the faculty and corporation turned the scale, laid the foundations of future success yet deeper and

broader and began to build well upon them. Such was the situation when President Rogers, looking for a successor, consulted Professor Brush of the Sheffield Scientific School, many years earlier his own assistant in the geological survey of Virginia, in regard to Professor Walker. The Institute needed a man strong as a leader, to marshal its somewhat scattered forces into closer order, broad enough to recognize and honor the intrinsic breadth of its work in pure and applied science; brave and tactful enough to win support in a conservative community not always fully conscious of its educational needs. Such men were few.

President Walker arrived in the fall of 1881, fortunately a few months before the death of his venerable predecessor, at the graduation exercises of 1882. Of the progress of the Institute since that time, often toilsome but always forward, his annual reports from 1883 to 1896 bear graphic witness. The original Rogers Building held all departments but shop-work until 1883. Liberal gifts, in great part a memorial of President Rogers, provided for the erection of a new building,—the present Walker Building,—designed with special reference to the departments of chemistry and physics, but believed, too readily, to insure for a long period ample space for all.

The new department of electrical engineering and the increased efficiency of others, notably civil and mechanical engineering, attracted ever increasing numbers of students.

The Report of 1886 refers to the absolute necessity of costly development, and in 1889 accommodations were again extended by the erection of the Engineering Building with laboratories of steam, hydraulics, and applied mechanics on a scale before unknown.

Funds flowed in from friends old and new, but could not keep pace with the growth of the Institute in reputation, attendance, and needs.

New courses were introduced, all courses were extended and enriched, by increased specialization on the one hand, and by continued efforts to bring the methods of the laboratory closer and closer to those of practice. Never was it for-

gotten, however, that the laboratory of the school must preserve its educational integrity by refusing to subordinate instruction to any commercial or other end. The Institute has conferred no such degrees as C. E., M. E., E. E., etc. Its graduates are not engineers, they are " bachelors of science," trained to become engineers, or chemists, or architects by that practical experience which no technical school can give.

Such progress is exceedingly costly. Increasing members meant not merely increasing revenue, but still more rapidly increasing expense. Large classes must be divided into small sections, delicate or powerful apparatus must be purchased; above all, land for future expansion must be secured at a most burdensome sacrifice, lest rapid business progress should blockade the Institute completely. The department of architecture, with better organization, was the next to migrate from outgrown quarters, taking possession of a building of its own in 1892, and already, in 1896, President Walker was bending all his energies to secure still larger accommodations for this and others, looking forward confidently to the completion of an additional building in 1897.

Over and over again in his reports his sanguine hopes show the burden of grievous financial cares. No man could state the needs of the school or its value to community and commonwealth more effectively, none was less capable of securing funds by appealing to the lower motives of vanity and self-interest.

Under the national acts of 1862 and 1890 Massachusetts had accepted and recognized the Institute as its " college of mechanic arts." It had at the outset received the right to occupy two-thirds of a square of State land. Once, at least, it had applied for State aid and been refused. Applications in 1887 and again in 1895 were more successful. On the latter occasion President Walker closed his " Appeal to the Legislature " as follows:

" If, more than thirty years ago, the General Court of Massachusetts, in chartering the Institute of Technology, rightly apprehended the needs of the industries, arts, and manufactures of Massachusetts, can it be questioned that the

pressing demands of the present time, for the application of science to industry within this commonwealth, would justify the General Court of 1895 in making the modest appropriation asked for the support and advancement of our chief school of industrial science and industrial art? If Massachusetts would, in spite of her limited natural advantages, maintain her manufacturing supremacy, she can only do so by the exercise of the same means that first brought her that supremacy; namely, by commanding the highest trained intelligence for the organization and conduct of her industrial, commercial, and financial enterprises."

The warm and general interest manifested often in unexpected quarters in support of this appeal afforded him the highest gratification, and the final passage of the bill gave him a sense of relief long unknown.

The material progress of the Institute from 1881 to 1897 it has been easy to indicate. To measure its gains in influence and reputation, the advance in its ideals is more difficult. Perhaps the best ultimate measure of the success of a school of any grade is the quality of its graduates.

Up to 1881, 282 persons had received its diploma, the oldest graduates were of but thirteen years' standing, few had had time to win reputation. Since 1881 more than 1300 names have been added to the rolls, the older men have continually advanced, so that now Institute graduates are making the value of its work known in every great industrial center, in every line of industrial development. As President Walker has more than once said, the supply of such men has created an ever growing demand. One mill or railroad after another has discovered not that it could afford to employ technically trained young men, but that it could not afford to do without them. On the other hand Institute graduates have come to recognize more and more loyally their obligations to their *alma mater*; their associations have grown in numbers and in enthusiasm, and nothing has helped this more than the close and active sympathy always and everywhere subsisting between the president and the graduates.

Even during the busiest of his years in Boston, President Walker's services to education were not limited to the Institute of Technology.

He was a member of the Boston School Committee from 1885 to 1887, of the Massachusetts State Board of Education from 1882 to 1890. He was connected, as visitor or lecturer, with other colleges and delivered numerous addresses before educational societies and institutions.

His uniform attitude with reference to public service was expressed in his letter accepting a nomination for the School Committee. "I do not covet any addition to my present duties; but the schools of the city and of the State have the first claim upon my time and strength, and if it were necessary for me to unload in any and every other direction in order to undertake a responsibility with which my fellow-citizens chose to intrust me regarding the public schools, I should not hesitate to do so."

His service on the committee was characterized by scrupulous and painstaking attention to small matters as well as great. His chief interests were the improvement in arithmetic instruction adopted by the board after an aggressive effort by him in 1887. It may be admitted that there was reason on both sides of this controversy. Doubtless the abuses he denounced so earnestly were, to some extent, peculiar to particular schools or teachers; possibly, too, his sympathy with the youthful victims of abuse struggling with "jagged fractions" and mathematical conundrums made him view the system not quite impartially. Certain it is that his arguments found ready and wide sympathy and effected an actual reduction of the time given to arithmetic which could hardly now be reversed.

In the promotion of another educational reform, the introduction of hand- and eye-training in all grades of the public schools, he found a most congenial field. During his service on the School Committee, the kindergartens previously maintained by the munificence of Mrs. Quincy Shaw became a part of the city school system; cooking, sewing, and other

forms of manual training were extended, and the way opened for the subsequent establishment of the Mechanic Arts High School. In this whole movement President Walker's interest and co-operation were most effective.

On the State Board of Education he had opportunity to promote the same reforms in a different field. He was especially interested, also, in elevating the standard of normal school work by requiring better preparation for admission and by diminishing the amount of time diverted for ordinary secondary school studies, to the detriment of the legitimate special work of these schools.

Such, in brief, are the salient facts of President Walker's educational activity. It is interesting to look at least a little beneath the surface; to analyze, at least qualitatively, the genius of the teacher, the character of the man.

Some have won fame in education by profound research in the philosophy or history of pedagogics, some by assiduous labors in promoting the material welfare of schools or colleges, some by their skill in swaying the feelings and opinions of learned or legislative bodies. In none of these directions lay President Walker's greatest strength.

He was pre-eminently a leader, pre-eminently a leader of young men. His soldiers fought with his courage, his students studied with his insight, his associated teachers taught with his enthusiastic, vivifying zeal. He knew young men, he rejoiced in young men, and his knowledge was power over them and power in them. With most intimate sympathetic acquaintance with their qualities he always judged them with abounding charity. The earnest student, without ever exchanging a word with the President, felt for him the cordial confidence of a younger brother. Even the inveterate shirk, coming to him perhaps for censure, was uplifted by his generous optimism, gaining self-respect and becoming for the time, at least, as earnest as his fellows. With his nearer associates and friends he had that sunny cordiality which radiates light and warmth, but which so rarely survives the stress and strain of toilsome middle life.

The earnestness characteristic of Institute students made

President Walker's work with them peculiarly congenial, and he, on the other hand, enriched them by holding up earnestness as good in itself and as good for other purposes as well as for the primarily interested object of self-advancement. The Institute was always to him "a place for men to work and not for boys to play," yet with their less serious side of life—their publications, their societies, and, notably, their athletics none had keener sympathy than he. Young manhood was admirable to him in its physical as well as in its mental perfection.

His own intense activity and his insistence in earnest work have at times exposed him to misconception. It has been said that "the one intent and aim before him in his building up of the Institute of Technology was to make the course so vigorous that only the strongest could hope to complete it. It was an institution where men went to equip themselves for life work, not a hospital for the treatment of mental weaklings." The second sentence needs no confirmation, the first is altogether misleading. He was sensitive, almost to excess, on the subject of mental overwork by students. The faculty of the Institute sets a definite, well-understood limit to the work to be required of any regular student in any term. Time and again he took pains not merely to enforce this rule, but to call the attention of overzealous teachers to its importance. Time and again he cautioned students against attempting even so much, if beyond their strength. Quality of work, not quantity, was his requirement as it was that of the faculty. The fact that Institute students are thrown so fully on their own responsibility makes it possible for some to overwork, for others to neglect their work; he desired as little the former result as the latter.

As an administrator, President Walker sought always to lead rather than to drive, to win assent rather than to compel acquiescence. Perhaps because he had known war, he avoided even verbal antagonism in time of peace. His courage of opinion may not be questioned, but he knew and he taught others that much truth need not be hastily spoken. Neither in the faculty nor corporation of the Institute was

there lack of diversity of opinions and interests. His aim was always to secure harmonious action or else inaction until harmony should come.

Of teaching, in the strict sense of the word, he had in later years relatively little. The classes of his earlier time in Boston were fortunate in hearing his lectures in political economy, given to all regular students in their third year. Which one of them can forget, however helpless of memory as to theories of rent and wages, the affluence of illustration, the luminous exposition which, without sacrificing an iota of thoroughness or impartiality, removed mountains from the pathway of the faithful? To his temperament it was impossible to reduce economics to the metaphysical formalism of those who had made it a " dismal science." The " economic man " was to him not merely a vague abstraction, but a mischievous device for making the unreal have the semblance of the true.

If not a discoverer of new principles of education, or an exponent of a particular philosophy, of certain great fundamental principles he made enormous use.

The reaction of the new education against the old had no more marked, no more beneficent element than the great development of the study of things as distinguished from the study of books. Of the necessity, the dignity, the distinctly educational value of this study, President Walker was an unwearied champion. So, in his report of 1886, he says of the last graduating class of the Institute:

" Those years had been spent in the work, not of decoration, but of construction; not in polishing the surface, but in building up the substance of mind and character. Little time or thought had been expended in memorizing facts previously ascertained, or in rehearsing the opinions of others; but from the first day's exercise in the laboratory of general chemistry, on through all their course, these young men had been taught to see with their own eyes and think with their own minds, weighing, probing, analyzing, testing for themselves, the substances and appearances which formed the subjects of their study, until, through the development of

their perceptive powers, through the formation of a habit of careful, discriminating, and minute observation, and through the exercise of the faculty of judgment, the least gifted of them had become capable, as evidenced by the severe test of our thesis requirement, of selecting a field of investigation, isolating the subject-matter, eliminating for the time everything alien or adventitious, providing all the conditions of a true experiment, and, through the application of approved tests, making an actual contribution to human knowledge. This is what we deem education in the best and fullest sense of that term."

Certain articles of President Walker's educational creed have hardly been better stated than in his opening address as chairman of the Department Congress of Technological Instruction at the Chicago Exposition. He raises six main questions, and indicates the answers he would give.

1. Unlike the older professional schools of law, medicine, and divinity, the schools of technology have relatively few college graduates among their students. Therefore, "we are bound to inquire whether their curriculum should not be more or less qualified and modified to meet the fact that these pupils are to receive no further and no other college training."

2. In regard to certain points of view: "My own opinion is that engineering education is primarily and principally an educational and not an engineering problem; and that the judgment of a strong and experienced teacher who has studied that problem is more likely to be right than that of any engineer without experience as a teacher, however eminent he may be in his profession."

3. In regard to university connection: "No advantage which a technical school can derive from association with a university, through the ability, experience, and comprehensive views of the corporation of such a body, will compensate for any lack of moral and intellectual sympathy with the purposes of technical education, any lack of respect for the studies and exercises of the technical school."

4. In regard to educational ideals: "I cannot but believe

that, with larger experience, and with more of conference among those who administer technological education, there will be a decided movement in the direction of subordinating the acquisition of the knacks of a trade and mere technical devices to the study of principles; and that, even in the applications of principles, valuable and invaluable as these are, reference will be had rather to their effect in giving a greater mastery of the principles themselves than to their immediate utility in professional practice. Nay, more, I confidently believe that, even in the study of scientific principles, a continually increasing regard will be paid to their influence in expanding the mind, enlarging the views, elevating the aims, and strengthening the character of the pupil."

5. In regard to philosophical studies: " For myself, I am much disposed to believe that that technical school will best discharge its duty to its pupils and to the state which gives to its students, in addition to those studies and exercises which will make them exact and strong, some measure, also, of those studies and exercises which will tend to make them, at the same time, broad and fine."

6. This touches briefly on the question of uniformity of admission requirements.

He adds a vigorous protest against the imputation " that the technical applications of science are incompatible with that *disinterestedness* which it is said, and truly said, is essential to the highest results in education. . .

" Now, it seems to me, we are bound to resent and repel this imputation, without terms and without ceremony. We assert that this disinterestedness of study does not depend upon the immediate usefulness or uselessness of the subject-matter, but upon the spirit with which the student takes up and pursues his work. If there be zeal in investigation, if there be delight in discovery, if there be fidelity to the truth as it is discerned, nothing more can be asked by the educator of highest aims. A young man who is earnestly laboring to prepare himself for an honorable and beneficent career in life may be disinterested in every sense in which that term can be used with approbation."

Better known are President Walker's articles in this REVIEW on "The place of scientific and technical schools in American education" (December, 1891) and "The relation of professional and technical training to general education" (December, 1894). In the latter is expressed most effectively his high appreciation of the value of liberal studies in the curriculum of a technical school.

"Merely for business success, in the most distinctly technical profession, philosophical studies are of great importance. In none of the higher walks of life does it ever cease to be more the question how much of a man one is than how much he knows of his special business. And this is even more distinctly true in the engineering profession, for example, than in the law. A great lawyer is generally a great man, but he need not be. There is a melancholy abundance of instances to the contrary. But a great engineer must be a great man. All great engineers, according to the testimony of those who knew them, have been great men.

"My contention is, therefore, not against the introduction of liberal studies, upon the most liberal scale, whether for cultivation or as a means to subsequent professional success, but only against the assumption that liberal studies must, to secure the best effect, be pursued with a special degree of liberty of choice and with leisureness of effort. On the contrary, I should be disposed to hold that *liberal studies should be severely pursued;* and that, for the highest results, the more liberalizing the tendency of any intellectual exercise, the more it is to be desired that it should be followed out with energy, with closeness of application, with punctiliousness of performance, with careful scrutiny of the results obtained.

"Those professional schools will best accomplish their strictly technical purposes which send their graduates out into the world with broad, well-balanced minds; with the faculty of judgment strengthened by the mastery of principles more than by the acquisition of information; with temperaments chastened to the true union of conservatism

and enterprise by study of the best examples from practice; and even with fine tastes and high aspirations."

The abundant measure of success achieved by President Walker in education may be ascribed largely to certain fortunate natural qualities, which would, indeed, have contributed almost equally to insure him eminence in any other field of sufficient breadth. He was aggressive, but not intolerant, capable of magnificent indignation, but never of discourtesy, resolute in his own opinions, but appreciative of those of others. Trained first in the older education, he gained in military service maturity and full command of all his powers, in administrative office broad acquaintance with men and affairs, and finally, in the liberalization of education, a worthy cause for life-long enthusiasm. As head of the Institute of Technology, he showed remarkable power of assimilating certain general principles underlying forms of technical work, which were in their details necessarily foreign to him. Almost as remarkable, and perhaps even more valuable, was his power of securing the co-operation and cordially recognizing the best qualities of men of most diverse temperaments.

By every instinct of his nature he was broadly, wisely liberal. For the deep impress his liberality has left upon contemporary education, by example even more than by precept, we may be profoundly grateful.

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VII

THE STUDY OF EDUCATIONAL METHOD

Some years since the head of a school of pedagogy, commenting upon some proposed studies in methods of teaching, laid down this dictum: Method is going out, individual psychology is coming in. Putting aside the *non sequitur* implied in this statement, it has always been the opinion of the present writer that method is always a prime consideration in effective instruction, following in importance hard upon spiritual insight and special scholarship, which are indeed the first conditions of teaching power. There is no opposition between methodology and psychology. Neither can the fine generalizations of the Herbartian school, as signalized in the elaboration of the five formal steps in teaching, rightly persuade anyone to relinquish his interest in special method. But how shall we co-ordinate our studies in method? I answer as follows:

First, the starting point in the study of educational method is the study of particular instances of teaching. Where shall we begin our study of how to teach? What ought to be the starting point in our renewed study of educational method? This is the answer: We should begin by observing, and appropriating to ourselves, the inner power of actual examples of teaching. We must study method in the concrete. Our first notions of method, as we renew our studies, should be gained from personal observation of the teaching acts of others. When we have observed how others teach, when we have studied the methods of instruction used by successful teachers, we shall then have that first-hand knowledge of method which is not only the preliminary condition for fruitful thinking, but also of any further progress through reading. Seek, therefore, to see teachers at work; note the methods of all who persuade, convince, and instruct; notice

what previous preparation evinces itself, what particular aims discover themselves, and by what successive steps these aims are realized. Those whose good fortune it has been to see Agassiz instruct in natural science, Michael Faraday in chemistry, John Tyndall in physics, Principal Parker in pedagogics, President Harper in languages, or similar masters in their particular specialties, will be most fully prepared to profit by further study. The rational process, in observing and reflecting upon an act or series of acts of teaching, is to consider: (1) the end or aim; (2) the order of steps; and (3) the natural and logical tendency of the means taken to realize the proposed end.

In the second place, personal observation must be supplemented by the observations of others. The circle of one's own experience is necessarily small. To get a general view, the number of instances must be large. Our knowledge of teaching acts must be extensive and comparative. Oral accounts of superior acts of instruction are not to be despised; and what is recorded of the great teachers of the past is invaluable. Plato's representation in the *Meno* of how Socrates would teach geometry; Socrates' own account of how his teacher, Prodicus, declaimed the "Choice of Hercules"; Joseph Payne's account of Jacotot's method of teaching physics in the University of Louvain, and the same writer's account of Tyndall's teaching beginners in geometry at Queenwood School, London; John Addington Symonds' account of the instruction of Jowett, master of Balliol College, Oxford; Frederick W. Robertson's account of how he studied at the last mentioned university—each of these is in its own way significant and helpful to the student of methodology. It is with educational method as with the methods of physical science: "Theories of method," says J. S. Mill, "are not to be constructed *a priori*. The laws of our rational faculty, like those of every other agency, are to be learned only by seeing the agent at work."

The third step in the study of methods of teaching is thorough analysis of the subject-matter in which instruction is to be given. A certain degree of method is implied in the

very nature of the subject to be taught. There is a certain order in which the different topics of any branch of knowledge arrange themselves which indicates an order of presentation. For example, in geometry instruction in the triangle and its properties logically and naturally precedes teaching of the circle and its properties; in geography, instruction in latitude and longitude presupposes the knowledge of the shape of the earth. Thorough knowledge, then, of any subject reveals in large measure in what order, by what steps, and to what final end it is to be presented. An exhaustive analysis of the physical relief of Great Britain could not fail to throw much light upon the right method of presentation.

Under this head comes the superior methodological advantage springing from original investigation. Superior insight into the relations of any subject leads directly to lucidity of presentation. "The character and duty of the German university instructor," says Professor Paulsen, "are marked out by two points: he is at once an investigator and teacher." Our conclusion must be this: that the study of the science to be taught may be, as Arnold Tompkins points out, just as professional as the study of educational psychology, or of the history, principles, and methods of pedagogy.

The fourth consideration in our study of method is this: that methods of teaching are to be compared and viewed historically and genetically. Like civil and political institutions, methods of teaching have gradually developed into their present forms from an originally much more simple habitude or custom. Now, when the historian desires to show the form and power of a civil institution, he does not content himself, as Mr. Fiske tells us, with simply describing its present shape, but "points out its origin, indicates some of the processes through which it has acquired its present shape, and thus keeps before the student's mind the fact that government is perpetually undergoing modifications in adapting itself to new conditions." This historical method should be applied to methodology. Our methods of teaching ele-

mentary reading should be looked upon as a development from the ruder methods of the schools of the previous generation; our elementary natural-science work should be regarded as the fair outcome as much of the Pestalozzian object lesson as of the general scientific tendency of modern thought.

We must finally have an apparatus of criticism—a critique of method. It is an error to suppose that in the present and constantly shifting state of psychological study it would be possible to construct a philosophy of pedagogic method solely by drawing corollaries from laws of mind. Better is it for us to construct our theories of method starting with the best practice of to-day, collecting, comparing, and harmonizing conservative and progressive tendencies, and applying to all theories, as a critical apparatus, the conclusions of psychologic investigations. This critical apparatus we shall find ready to our hand in the accredited results of both the older and the later lines of investigation. We shall thus be able to criticise and improve existing methods. Every scheme of general and special method, every doctrine of formal steps or of special device, must be subjected to the test of psychology. No device constituting a part of a general method of presentation is to be slightly regarded, if there is to be found a ground for it in psychology. That must be true in teaching which Aristotle asserts of rhetoric, that every expedient of arrangement, appeal, and persuasion may be reduced to a principle.

The co-ordination of a study of method implies, therefore, that the process of study of educational method should be (*a*) inductive and (*b*) historical, based on (*c*) a thoroughly analytic view of the science to be presented, and (*d*) having regard to all methods as genetic and developing; and, finally, (*e*) having regard to psychology as the natural critique of all methodology.

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VIII

REVIEWS

The will to believe, and other essays in popular philosophy—By WILLIAM JAMES. New York: Longmans, Green & Co., 1897. 332 p. $2.00.

The thousands of students of Professor James's *Psychology* will take up his new book with eager anticipation of pleasure. And they will not be disappointed. The directness of style, the aptness of illustration, the frank recognition of difficulties, the downright love of truth, the rare capacity to see the whole concrete fact, which delighted them in the old book, they will find in the new. But in one respect the new book is much more interesting than the old. As Professor James himself says, the most interesting thing about a man is his ideals, and this book reveals the author's ideals, the attitude which patient, honest thinking has enabled him to take toward those great questions upon the answer to which depends one's conception of the significance of life.

The essays of which the work consists have the following titles: "The will to believe," "Is life worth living?" "The sentiment of rationality," "Reflex action and theism," "The dilemma of determinism," "The moral philosopher and the moral life," "Great men and their environment," "The importance of individuals," "On some Hegelisms," "What psychological research has accomplished." As the author says in his preface, they express a "tolerably definite philosophical attitude"; to this attitude he gives the name of "radical empiricism."

Professor James calls his attitude empiricism because he thinks there is but one indefectibly or absolutely certain truth, "that the present phenomenon of consciousness exists." The imposing edifice of physical science is to Professor James nothing but a body of working hypotheses which satisfy certain demands of our emotional or passional nature, and explain, more or less satisfactorily, the facts of

experience. That any hypothesis or scientific "truth" may become an indefectible certainty, we must show that no other hypothesis can explain the facts equally well; we must prove an *alibi* for the rest of the universe—which, Professor James would say, has not yet been done; I think he would say that it never can be done.

Professor James calls his empiricism radical because it is thoroughgoing. It has no limits or bounds. Positivism prides itself on being empirical. But its empiricism is not of the radical variety. Positivism is "dead sure" that nature is uniform, and that the faithful observance of Mill's "Canons of induction" will lead to absolutely certain knowledges, or to a kind of probabilities indistinguishable from them except in degree. Scientific naturalism, again, is not radical empiricism, because it dogmatically excludes all but physical causes in its explanations. Spencerian agnosticism, also, in the same breath in which it affirms that the inmost nature of things, the ground of all phenomena, is unknowable, affirms with a dogmatism that reminds one of the Spanish Inquisition that the *law* that it obeys is the law of physical force—that to conceive of it as obeying any other is absurd and impossible. All three of these modes of thought regard what we may call this point of view as established with indefectible certainty. That only outlines and fragments of truth are as yet discovered, that in this and that detail the conclusions of science may be reversed, they freely admit. But the truth of their respective postulates is established, they would say, by such a mass of purely objective evidence as to put them beyond the pale of possible doubt.

It is precisely at this point that Professor James takes issue with them. Of purely objective evidence, evidence that would influence the operations of a pure intellect, an intellect free from all emotional or passional propensities, he thinks there is absolutely none when you leave the realm of pure mathematics. "Pretend what we may," he says, "the whole man within us is at work when we form our philosophical (and scientific) opinions. Intellect, will, taste, and passion operate just as they do in practical affairs; and lucky it is if the passion be not something as petty as a

love of personal conquest over the philosopher across the way. The absurd abstraction of an intellect verbally formulating all its evidence, and carefully estimating the probability thereof by a vulgar fraction by the size of whose denominator and numerator alone it is swayed, is ideally as inept as it is actually impossible. . . Every philosopher, or man of science either, whose initiative counts for anything in the evolution of thought, has taken his stand on a sort of dumb conviction that the truth must lie in one direction rather than another, and a sort of preliminary assurance that his notion can be made to work."

You are sure that nature is uniform, Professor James says to the positivist. Analyze the grounds of your certainty, and you will find that it is based on two facts: (1) Your emotional or passional nature causes you to postulate uniformity with such a strength of conviction that no amount of failure would cause you to abandon it. You *demand* uniformity, and in the presence of the greatest apparent confusion your confidence that nature will yet illustrate the truth of your belief remains unshaken; and (2) the facts of experience *do not compel you to abandon it.* But if your certainty is to have more than an empirical basis, if it is to rest on purely objective grounds, instead of showing that the facts of experience leave you in possession of your postulate, you must show that they prove that you can rely on it, prove that you can assume the uniformity of nature in all your reasonings about the universe—which is impossible. Analyze, also, the ground of your certainty that the observance of the canons of induction will lead you to absolutely certain knowledge, and you will find that those canons will not work unless you make the same irrational (from the point of view of the pure intellect) assumption which the horse (implicitly) makes which starts when he sees the whip lifted over his back, after he has had experience of it. Precisely as the horse does not prevent himself from connecting the feeling of pain with the perception of the whip by the thought that the connection of the two in his past experience may have been purely coincidental, that his pain may have been caused by something on the moon, so the chemist in his experiments finds it convenient to disregard the

changes that are taking place on Sirius. And if the horse were a philosopher, or even a man of science, he could give no better account of his belief than to say that the supposition that it was true worked well; and the chemist, in common with all of the rest of us,—philosopher, scientist, and layman,—is in the same predicament. All of us are able to reason about the concrete facts of life and the universe only by continuing to make the assumptions which we found ourselves making when we began to reflect; assumptions which we make only because of our non-rational nature, because of the nature which we have in common with the animals.

To the scientific naturalist he would say, How has it happened that you are so sure that none but physical causes can be accepted as valid explanations? How have you been able to make an inventory of all the possible causes in this universe? What has given to your eyes such keenness of vision as to enable you to see that, throughout its possibly infinite extent, no causes except those of a certain description are in operation? You also ground your belief on certain arbitrarily selected passional impulses. Your inventory is due to your rejection of all causes except those that appeal to certain impulses; your keenness of vision to your mutilation of your nature, to your treating certain impulses as though they were worthy of all respect and consideration, and to your requiring certain other impulses to prove their title to your confidence before you listen to them.

To the agnostic Professor James says: Be consistent. Apply the same methods to determining the nature of the ground of all phenomena that you do to determining their laws. If you do, though you may continue to pronounce it unknown, you will cease to call it unknowable. "The inner need of believing that this world of nature is a sign of something more spiritual and eternal than itself is just as strong and authoritative, in those who feel it, as the inner need of uniform laws of causation ever can be in a professionally scientific head." Or apply the same method to determining the laws of nature that you do to determining the ground of phenomena, and you will find yourself involved in absolute skepticism; you will find that you have demanded a kind

of evidence that is not forthcoming to "such a being as man in such a world as the one we live in."

For the practical consequences of Professor James's doctrine, I must refer the reader to the book itself. I will only remark that Professor James seems to me to prove that everything that makes life worth living, that gives to it real significance, must be vindicated by his doctrine. In his own language, "to compare the *worth*, both of what exists and of what does not exist, we must consult not science, but the heart."

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A new manual of method—By A. H. Garlick, B. A. New York: Longmans Green & Co., 1896. xx, 331 p. $1.50.

Though Mr. Garlick's book was written for English teachers, and adapted to the English code, it will be found most serviceable by American teachers. It is not, like Sir Joshua Fitch's *Lectures on teaching*, or Mr. Quick's *Educational reformers*, a contribution to literature as well as to education. It reminds one, in appearance, rather of a textbook on chemistry than of the graceful essay or the philosophical dissertation. The author expounds no philosophy of education, advances no special theory of training. He is content to lay before his readers a compact mass of rules, suggestions, plans, by which experience has demonstrated that good results in school management and in teaching various branches have been obtained.

Matthew Arnold, in one of his reports, remarks that the apparent conformity of a method of teaching to some general doctrine apparently true is no guarantee of its soundness. "The practical application alone tests this [the soundness of the method], and often and often a method thus tested reveals unsuspected weakness." The truth of this observation is amply borne out by experience. However much we may all desire to be rooted and grounded in principle and doctrine, we can never allow ourselves to forget that results are the supreme test. Verification by experiment is as necessary with regard to theories of education as theories of science.

Mr. Garlick lays down rules of teaching and school management that have been fully tested in practice. Yet I cannot but think that his book would have commended itself more fully to thoughtful teachers, had it traced these rules and methods back to the principles on which they are founded. However this may be, there can be no doubt of the usefulness of his work.

He treats of all the subjects in the elementary curriculum —the preparation of lessons, class teaching, object lessons, kindergarten, arithmetic, reading, spelling, writing, geography, history, language studies, elementary sciences, and music—and devotes a chapter each to school economy, discipline, and classification. The conspicuous merits of the book are its clearness, its conciseness, and its fullness. If a teacher is at a loss to know how to teach an important point,—say in arithmetic, history, or geography,—he has only to open this book at the appropriate heading, and he will find an excellent method of presenting it, which, if he has any ingenuity, he can easily adapt to his own uses. If he is in doubt about a matter of discipline, such, for instance, as how to treat a case of obstinacy, he will find the different kinds of obstinacy classified, and the appropriate treatment suggested for each kind. In short, the book is a *vade mecum* which the teacher should no more think of reading through than he would of perusing the dictionary from cover to cover, but which he will do well to consult when confronted with a difficulty.

The only chapter which calls for severe criticism is that on the kindergarten. The student will do well to seek some other source of information as to the theory and the spirit of Froebel's system.

WILLIAM H. MAXWELL

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Teaching the language arts: speech, reading, composition—By B. A. HINSDALE, Ph, D., LL.D., Professor of the Science and the Art of Teaching in the University of Michigan. New York: D. Appleton & Co., 1896. International Education Series. 205 p. $1.50.

The "Language Arts" is Dr. Hinsdale's technical term for what is generally called "English" in the schools—that

is, the process of teaching young people how to read, speak, and write their mother tongue; to read it with intelligence and appreciation, to speak and write it with correctness. There is scarcely a statement in the whole course of the book that can well be doubted; there is nothing pertinent that has been omitted, so far as the reviewer can see. Dr. Hinsdale has given a remarkably clear, sensible, and interesting exposition of the whole subject, and there must be few teachers of English throughout the country who would not be much the wiser for a careful reading of his work; but when all this has been said, one still wonders why it was found necessary to write a treatise on such a subject, or to cover the field so minutely. Learning to read, speak, and write is a very important matter—*the* most important matter, indeed, of its kind; but not until very recently has it been thought to be a very difficult matter. Professor Hinsdale has a good deal to say about the bad English of the depraved boys and girls now in the schools, starting from that most amusing, but famous, report in which Harvard College, without the ghost of a smile, confessed that boys who passed her entrance examination in English could not write correctly, and then reproached the schoolmasters for neglect of duty. One would have supposed that the attacked party would have left Harvard in her awkward dilemma, and insisted that she should either reject candidates or else not call them ignorant, when she had herself set the seal of approval on their training; but the discussion unfortunately took another course, and now we hear much, both from schools and colleges, about the *illiteracy* of American youth. To be sure, the whole matter is usually treated very superficially, and it seems not to have yet occurred to anyone to examine the question scientifically, and to prove that a discrepancy actually exists between the English of the modern boy and that of his father or grandfather at the same age and under similar circumstances, or between the writing of English and German boys and that of the American boys, under the same or similar circumstances. Granted that this alarming discrepancy exists, we may, it seems to me, fairly doubt whether scientific pedagogy has yet done much toward the solution of the problem. So it would have been well if Professor Hinsdale had insisted,

in his excellent and interesting book, on the fact that the habit of expressing one's self clearly and correctly is a perfectly simple one. Any boy can acquire it by the age of fifteen. If he does not, it is his father's fault.

G. R. CARPENTER

COLUMBIA UNIVERSITY

Composition-Rhetoric, designed for use in secondary schools—By FRED NEWTON SCOTT, Junior Professor of Rhetoric in the University of Michigan, and JOSEPH VILLIERS DENNEY, Professor of Rhetoric and English Language in Ohio State University. Boston: Allyn & Bacon, 1897. vii, 373 p. $1.25.

The forms of discourse, with an introductory chapter on style—By WILLIAM B. CAIRNS, A. M., Instructor in Rhetoric in the University of Wisconsin. Boston: Ginn & Company, 1886. xii, 356 p. $1.25.

Professor Wendell and Professor Scott are the men who have done most to oust formal rhetoric from our schools, and to build up in its place a rational and practical system of composition. Professor Wendell disregarded the intricate set of rhetorical rules, and substituted a few simple principles, of which the most striking was that words, sentences, paragraphs, and whole compositions may be properly treated as units in an ascending scale of forms—a principle that has had a marked influence on all subsequent treatments of the subject. Professor Scott belongs to the same school. His conception of discourse is "kinetic" rather than "static." He regards "composition not as a dead form, to be analyzed into its component parts, but as a living product"—a growth. He goes farther than Professor Wendell, however, in maintaining that the paragraph is the most important unit in discourse, and that the student is the gainer by treating all forms of composition as functions, so to speak, of the paragraph rather than of the word or the sentence. This principle, enunciated some six years ago in his college text-book, Professor Scott has now applied to composition in the secondary schools. A distinct success must be predicted for the present volume, in which the system is developed with great common sense, and in a homely, straightforward fashion that reminds one of Cobbett's *Grammar*. Indeed, in the present writer's opinion, the book's only fault is its unnecessary length. It is but fair,

however, to say that its bulk is due to the insertion of a large number of admirable exercises and pertinent illustrative extracts.

Mr. Cairns's work is of a different sort. Its tone and method are those of a college text-book. What rhetoric has to say about style and usage the author sums up succinctly in fifty pages. The rest of the volume deals with description, narration, and the other time-honored forms of discourse. The treatment is interesting and the doctrine sound; but, except in its more frequent use of illustrative matter, the book does not differ essentially from other similar manuals.

G. R. CARPENTER

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Coppée and Maupassant tales—Edited, with introductions, notes, and bibliography, by A. GUYOT CAMERON, Ph. D., Assistant Professor of French in the Sheffield Scientific School. xlviii, 188 p. New York: Henry Holt & Co., 1896. 75 cents.

On Rend l'Argent—Par FRANÇOIS COPPÉE—Adapted to classroom and edited with introduction and notes by THOMAS BERTRAND BRONSON, Master in the Lawrenceville School. xiv, 184 p. New York: Henry Holt & Co., 1896. 60 cents.

Half-hours in Spanish—By GERARDO ACHA, formerly instructor in Spanish at Girard College. Second Edition. xxii, 218 pp. New York: Acha & Co., 1896.

Dr. Cameron has made an admirable selection of tales illustrating French speech, thought, and feeling in our times. No student will fall asleep over this book, which, in itself, is a great point. The hero of the first story had been hungry all his life; the last, a brawny, gigantic negro, always fat and jolly—fattened on human flesh.

Coppée is well known as one of the finest of recent French writers. His educational value is enhanced by his large use of words and expressions not common in a formal style. Each of his stories is a picture—finished to the last touch, and suffused with a tender sympathy for the many whose lot is so hard. The weird and grewsome stories of Maupassant recall the *Murders of the Rue Morgue* and other feverish dreamings of Poe.

The editor's notes are generally judicious, clear, and to the point. One could wish that there were a few more of them.

The same cannot be said for his lengthy introduction. It soars above the heads of college students; and its wide and rather sublimated learning can be fully appreciated only by the few teachers to whom it is unnecessary.

The text of the second volume is a story beginning and ending on a Christmas eve, presenting four pictures of modern Parisian life, from rag-pickers to millionaires and decayed nobility. The style is light and bantering, containing a good deal of colloquialism, sometimes bordering on slang. It is, therefore, suitable only for advanced students.

The notes cover twenty-six pages, and will be welcomed by both teachers and students, obviating much troublesome research. Indeed there is not a little in them that must be obtained by a personal acquaintance with Paris and not by a search through books. The notes on persons and places occupy nearly five-sixths of the space, leaving but a small fraction for the elucidation of obscure words and phrases. The work would have been still more acceptable had the proportions been different. Our youth desire to learn the French language rather than the topography of Paris, general biography, and the capacity of the Baths of Caracalla. Many words and expressions in the text will be perplexing.

Mr. Acha has labored assiduously to make a foreign tongue accessible to persons of limited education. His explanations are minute; and he gives an ample body of good practical exercises, all translated literally for the benefit of the dull. It is "Spanish made easy." The purpose of the book determines its intellectually low tone. Its expositions are narrow and empirical, not exhibiting general principles. Correlated facts, as those pertaining to articles, personal and relative pronouns, are given bit by bit, instead of being grouped together. The change of *o* to *ue* under the accent is explained only after it has been used through seventy-four pages, and then imperfectly. In the case of the expansion of *e* to *ie*, the interval is still greater. The *imperatives* presented for 130 pages are not really imperatives at all.

Mr. Acha rejects the system of marking the accents adopted by the Spanish Academy and the higher modern literature. He does not distinguish the accentuation of

albarán and *compran, almacén* and *predicen,* while he does distinguish *albumen* and *consumen,* which are really accented alike. This is misleading and confusing. Many details are either incorrect or distorted in bringing them down to the level of the pupil's mind. Among them are some strange specimens of English, as, *feelst, enlightment.* "It is an age since I have not seen him." "How many flour barrels hold in your warehouse?"

M. M. RAMSEY

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Elementary treatise on electricity and magnetism: founded on Joubert's Traité élémentaire d'électricité—By G. C. FOSTER, F. R. S., and E. ATKINSON, Ph. D. Longmans, Green & Co.: New York, 1896. 552 p. $2.25.

In translating a treatise or text-book which has shown its value in the original, the result is usually a success in proportion as it is a simple translation. The moment modifications are introduced, the original homogeneity is sacrificed, and then the only safe method is to rewrite the whole. This treatise is no exception, and has suffered very much in various directions. Not a little of the apparent duplication and reiteration is, doubtless, due to the attempt of the translators to add a new treatment to the original of Joubert. Another temptation which the translators have evidently been unable to resist is using the cuts of the original edition. In these days of easy reproduction and cheap draughting, it is inexcusable to put upon the market a book with dilapidated cuts, that not only interfere with the appearance, but with the clearness of the explanations. As conspicuous examples, see Figs. 7, 18, 70, 72, 78, 156, 197, 216, 345; Fig. 92 is upside down. The commonest fault is letters mutilated beyond recognition. It is also a bad practice to use Greek letters more than absolutely necessary; the opposite is well illustrated, where, on p. 237, *et seq.*, omega is used for a solid angle, and omega circumflex is a magnetic moment. When a student is struggling to understand an explanation, he ought not to be puzzled with indistinct figures or complicated nomenclature.

It would doubtless be much better if we could confine our

discussions much more to the dielectric, and less be said of conductors; but the latter offer a much simpler way of speaking of the conditions, and one more readily comprehended by the beginner. It would be well enough to devote a chapter to illustrating the preferable mode of expression, without confusing the reader by constant changes from one to the other. This insistence upon strict interpretation would not naturally be expected of authors who are willing to use line of force as equivalent to tube of force, and to use such terms as electromotive *force* and magnetomotive *force*. It is greatly to be regretted that the attempt to introduce the accepted absolute (C. G. S.) system of units has been so unsuccessful and so scattered. The great beauty of the system is its completeness and homogeneity, and neither of these characteristics can be brought out when it is served up in small bits here and there. Moreover, we have accepted the electromagnetic system, and such units as the coulomb, farad, ohm, volt, and ampere are not electrostatic units at all, and it is very confusing to the student if they are referred to as such, even indirectly. The relation of these, again, to the mechanical units should be made perfectly clear. It seems superfluous to insist upon introducing specific inductive capacity and permeability into dimensional formulæ, and then admit complete ignorance as to their dimensions. It may be very convenient to deduce general laws of potential, flux of force, etc., at the outset, and then simply apply them to special cases; but those conceptions are difficult for the beginner at any time, and especially before he is provided with a goodly store of experimental facts. In short, it can scarcely be said that the translators' introduction of Maxwellian treatment is a success. A notable case of labored and complicated deduction is that of the formula for the ratio of field to magnetic moment for the Gauss first and second positions. In spite of considerable space devoted to magnetic poles the subject is not clearly treated, and the proper method of determining their location is not hinted at. A number of incompatible statements are made under the various heads of contact, electricity, thermo-electricity, and Peltier effect. The subject of direct and alternating current generators and motors is well, though briefly, treated,

and the telegraph and telephone are discussed in a few pages. Even the phonograph is introduced, though its connection with electricity is not apparent.

As stated at the outset of this review, the material of the original and of the translators has not been thoroughly harmonized. If the translators had written a treatise upon Joubert's outline, a good book would doubtless have resulted, for the present volume abounds in valuable information, and is in general well presented; but the science of electricity has reached a state of development where we may require of even an elementary treatise that it be a systematic homogeneous whole, clearly and concisely presented, with perfect type and figures, and with a nomenclature consistent in itself and comformable to general practice.

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In sickness and in health: a manual of domestic medicine and surgery, hygiene, dietetics, and nursing—Edited by J. WEST ROOSEVELT, M. D. New York: D. Appleton & Co., 1896. 991 p. $5.00.

The chief value of any working library lies in the number and character of its books of reference. The dictionaries, the atlases, the encyclopedias, the standard histories, and treatises on the main divisions of knowledge, and not the collection of works on minutely specialized topics, make good working libraries for the home and for the school. So far is this fact from being generally recognized that books of reference, save the most obvious, are often the last to be purchased, or are never purchased at all.

It ought not to need argument that an absolutely indispensable book in every library is a work that treats of the conditions of health and disease in human beings. For this purpose books on physiology are not suitable. The elementary books are too brief and too unsatisfactory; the advanced books are too technical. Books on therapeutics will not do; they are written almost exclusively for medical readers, and are useless to put into the hands of the average parent, teacher, or student. After a thorough examination of *In sickness and in health*, from several points of view, the present

writer is able to commend it unreservedly as a book that ought to be found in all school and private libraries worthy of the name. It is, in the first place, well and clearly written. It is sufficiently technical to be accurate, but not technical enough to confuse. It is very comprehensive and well arranged. It contains some chapters of a very remarkable character.

One of these is the treatment, in about sixty pages, of the subject of Psychology, by Professor Royce of Harvard. As a summary and helpful introduction to psychology, whether for the student or the general reader, this article is, we feel sure, quite unequaled anywhere. Its very presence in a book of this kind is itself significant of the broad view of the editor. After reading Professor Royce's discussion, the intelligent parent will have a perfectly clear notion of what psychology is about, how it is studied, and what its relations are to healthful life.

Other especially good contributions are those on "Physiology," by Professor Lee of Columbia; on "Physical training," by Joseph H. Sears; on "Diseases in general," by the editor and Dr. William P. Northrop; and on "Nursing," by Anna Caroline Maxwell of the Presbyterian Hospital, New York.

The work is handsomely printed and bound, and the illustrations are both numerous and effective. We repeat that, as a book of constant reference, for the home and for the school, *In sickness and in health* seems to us little short of indispensable.

Easy Latin for sight-reading for secondary schools—By B. L. D'Ooge, Professor of Latin and Greek in the Michigan State Normal School. Boston : Ginn & Company, 1897. 146 p. 40 cents.

There is no longer any doubt in the minds of teachers as to the value of sight-reading in the study of Latin and Greek. But, unfortunately, sight reading and sight-translation are too frequently looked upon as synonymous. The author of this little volume has well said (Introduction, p. 1): "By sight-reading is meant the ability to read and understand Latin in the order in which it stands, without formal translation, and without slavish dependence upon grammar

and dictionary. If a translation be required, it should come as a subsequent exercise in English, after the thought of the Latin is already clear." Too much emphasis cannot be put upon the necessity of reading and understanding a language "in the order in which it stands." The Chinese-puzzle methods of studying Latin and Greek have passed away. "The aim from the outset should be to learn to *read Latin.*" Professor D'Ooge's little book meets a long-felt need in secondary schools, and should receive a warm welcome.

The Introduction covers twenty-three pages, and contains some admirable suggestions (fourteen pages), followed by a few "Models for written lessons" (five pages), and common Latin idioms (four pages). Then follows an easy and well-graded series of selections from Ritchie's *Fabulæ Faciles* (thirty-nine pages), Lhomond's *Urbis Romæ Viri Inlustres* (forty-two pages), and Gellius' *Noctes Atticæ* (thirty-eight pages). The chief value of the book lies in the character of these selections, as it was the author's "purpose to afford sufficient and suitable material for the entire preparatory course." Other points to be noted are the Notes, which usually give aid only where needed, the marking of long vowels in accordance with the best authorities, and the Pronouncing Vocabulary of Greek and Latin Proper Names. There are full-page illustrations of Perseus and the head of Medusa, Hercules, Iuvenis Romanus, and the Acropolis of Athens.

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NOTES ON NEW BOOKS

Mention of books in this place does not preclude extended critical notice hereafter

A frank imitation of Trübner's *Minerva,* with the addition of features that appeal to the curiously inclined rather than to the trained student of education, is offered in Emerson's *College year-book and athletic record.* An immense amount of carefully arranged information is included in the book. The statistical tables are excellent. Clark University and Princeton, of the better known institutions, stand out prominently as pursuing the silly and distinctly

harmful policy of concealing the amount of their annual income. The income of Bryn Mawr is erroneously stated as $1,500,000. The book abounds in minor errors, due largely to lack of knowledge on the part of the compiler and to having taken the statements of many institutions without critical examination (New York: Stone & Kimball, 1897. 592 p. $2.00).——The eighth edition of Professor Kelsey's *Cæsar*—decidedly the best, in our judgment, for school use—has just appeared. The changes and corrections are noted in the preface (Boston: Allyn & Bacon, 1897. 576 p. $1.25).——Dr. Setchell of the University of California has achieved a noteworthy triumph of text-book making in his *Laboratory practice for beginners in botany* (New York: The Macmillan Company, 1897. 199 p. 90 cents).——Among the several excellent manuals of geology which have recently been published, that by Professor W. B. Scott of Princeton will certainly attract favorable attention. It is written in a far more pleasing and correct style than most scientific text-books (New York: The Macmillan Company, 1897. 573 p. $1.90).——French care and system are seen to excellent advantage in Carré and Liquier's *Traite de pedagogie scholaire*. It would be a capital manual to be read and consulted by students in training classes and normal schools (Paris: A. Colin et Cie., 1897. 526 p. 6 francs).——The third series of M. Edmond Dreyfus-Brisac's *L'Éducation nouvelle* contains ten essays of importance, mainly on topics of secondary and higher education (Paris: Masson et Cie., 1897. 406 p. 6 francs).——Rawlinson's *Herodotus* is a work of permanent value, however much recent archæological researches may have impaired the value of some of the annotations. The new and serviceable edition by Mr. Grant of King's College, Cambridge, ought to be warmly welcomed (New York: Imported by Charles Scribner's Sons, 1897. 2 vols., with maps. 502, 376 p. $3.50).——In the fourth volume of Professor Woodburn's new edition of the late Alexander Johnston's *American orations* three subjects are represented—civil war and reconstruction, free trade and protection, finance and civil service reform (New York: G. P. Putnam's Sons, 1897. 481 p. $1.25).——The best and briefest summary of the

history and present organization of education in Japan, that has come to our notice, is Bolljahn's *Japanisches Schulwesen* (Berlin: A. Haack, 1896. 78 p. 1 M. 50 pf.).——An essay well worth reading is *Die Universitäten in den Vereinigten Staaten Amerikas*, by Athanasius Zimmermann, S. J. The learned author writes suggestively enough, but has failed to comprehend and to analyze the true forces that have been at work in American higher education for the last half century (St. Louis: M. Herdersche Verlagshandlung, 1896. 116 p. 43 cents).——The old classroom favorite in German texts, Zschokke's *Abenteuer der Neujahrsnacht* and *Zerbrochener Krug*, are edited in acceptable shape by Dr. Faust of Johns Hopkins (New York: Henry Holt & Co., 1896. 110 p. 25 cents).——A new and promising source for short and bright texts in German is represented in Professor Harris's edition of Ernst Wichert's *Au der Majorsecke* (New York: Henry Holt & Co., 1896. 41 p. 20 cents).——*Ancient ideals*, by Henry Osborn Taylor, is a scholarly and exhaustive study of intellectual and spiritual growth from the earliest times to the establishment of Christianity. It will be critically noticed hereafter (New York: G. P. Putnam's Sons, 1896. 2 vols. 461, 430 p. $5).——*The God-idea of the ancients*, by Eliza Burt Gamble, is a bringing together of an immense amount of historical and anthropological material to sustain the thesis that "sex is the fundamental fact not only in the operation of nature, but in the construction of a god" (New York: G. P. Putnam's Sons, 1897. 339 p. $2.25).——Inspector Hughes of the Toronto schools contributes to the International Education Series its latest volume, *Froebel's educational laws for all teachers*, the aim of which is to "give a simple exposition of the most important principles of Froebel's educational philosophy, and to make suggestions regarding the application of these principles to the work of the schoolroom in teaching and training" (New York: D. Appleton & Co., 1897. 296 p. $1.50).——Professor Joseph Baldwin's latest volume is a very definite and practical book on *School management and school methods*, that many young teachers, especially in rural and village schools, will find helpful (New York: D. Appleton & Co., 1897. 395 p. $1.50).——A new sketch of the life, character, and teach-

ings of the great Kant, that is at once abreast of modern scholarship, and written in an agreeable, readable style, is that by Dr. M. Kronenberg of Berlin. We are very glad to learn that it is to appear shortly in an English translation (Munich: Oskar Beck's Verlag, 1897. 312 p. 5 M. 50 pf.). ——The Werner School Book Company have just issued two very attractive books for young children. One, by Misses Beebe and Kingsley, is a first-year *Nature reader*, illustrated, partly in colors. The other, by Miss Pratt, entitled *Legends of the red children*, is a schoolroom version of the chief Indian myths (Chicago: Werner School Book Company, 1897. 154 p. 50 cents; 128 p. 55 cents).——Professor Magie's extensive revision of the *Elementary text-book of physics*, by Anthony and Brackett, makes a very useful and well-proportioned text-book for college students (New York: John Wiley & Sons, 1897. 512 p. $2.00).—— Another new text-book, much more elementary in character, is Stone's *Experimental physics* (Boston: Ginn & Co., 1897. 378 p. $1.10).——*Outlines of Physics*, by Professor Nichols of Cornell, is noteworthy as an attempt to give a course that may be accepted by the colleges as an alternative admission requirement (New York: The Macmillan Company, 1897. 452 p. $1.40).——In the well-known Textbooks of Science Series the latest issue is a new edition of Huntington and McMillan's *Metals* (New York: Longmans, Green & Co., 1897. 562 p. $2.50).——Professor Howe of the University of Denver has written a very attractive *Elements of descriptive astronomy* (Boston: Silver, Burdett & Co., 1897. 340 p. $1.50).——A very scholarly treatment of the subject of *Plane and solid analytic geometry* is offered by Professors Bailey and Woods of the Massachusetts Institute of Technology (Boston: Ginn & Co., 1897. 371 p. $2.15). ——Colonel T. A. Dodge's deservedly popular *Bird's eye view of our civil war* is now published in a new, revised, and cheaper edition (Boston: Houghton, Mifflin & Co., 1897. 348 p. $1.25).——Professor Henry Sweet's *Students' dictionary of Anglo-Saxon* needs only to be mentioned (New York: The Macmillan Company, 1897. 217 p. $1.75).—— In *The evolution of an empire* (New York: William Beverly Harrison, 1896. 312 p. $1.00) Mary Platt Parmele pre-

sents a brief historical sketch of the United States on a new plan. She neither burdens the child's memory with a mass of oppressive details nor attempts to make him a master of original research. She tells the fascinating story in a way to enchain his attention and arouse his patriotism.——Mr. Edgar H. Nichols, in *Elementary and constructional geometry* (New York: Longmans, Green & Co., 1896. p. vii, 138. $1.00) has prepared a book designed for pupils beginning geometry at the age of twelve, or even younger. In the hands of a good teacher, the study is of great value. To such a teacher this treatise will be a great assistance, provided he does not assign lessons in it, but uses it as the author suggests in the preface.——There is no author of antiquity whose works are better adapted to serve as an introduction to the study of Latin literature and of Greek and Roman history than Cornelius Nepos. Mr. John Edmund Bass has prepared an admirable edition of a few selected *Lives* for school use (New York: The Macmillan Company, 1896. pp. vi, 207. 40 cents). Mr. Bass's annotations are particularly valuable as leading the student to translate into terse, idiomatic English.——Alfred H. Carter, M. D., and Samuel Bott have prepared an attractive *Text-book of physical exercises* for the use of elementary schools (New York: The Macmillan Company, 1896. pp. vii, 168. $1.10). The book contains a valuable chapter on the physiology of exercise, and a very complete manual of exercises, both for and with apparatus. One of the most interesting features, and one that is new to many teachers, is " figure marching " or semi-military drills for the school yard.

EXTRACTS FROM EDUCATIONAL REPORTS

State Superintendent Charles R. Skinner, New York. . . Report for 1896

The Township System—Notwithstanding the apparent advance in the general school work of the State, thoughtful educators view with apprehension the failure of the rural schools to keep in touch with the onward movement of those more fortunately located in our cities and villages. Students of educational problems thoroughly appreciate that, in

view of the constant tendency of our population and wealth toward the cities and villages, the rural school problem has become the one most worthy of attention and most perplexing in its solution. A careful study of this problem has led to a conviction, substantially unanimous, that the chief difficulty with the rural schools is the lack of systematic and businesslike management of their affairs, consequent upon the district system; that the remedy most likely to correct existing conditions lies along administrative lines, and that the larger unit of the township is much better adapted to good administration than is the present district system.

The district system has been condemned and the township system approved by every Superintendent of Public Instruction in this State from 1860 to the present time. . .

In 1870 there were no fewer than 1500 school districts with an average daily attendance of less than 10 pupils each, while the reports for 1896 show more than 3500 such districts, and it is safe to estimate that the average daily attendance for all strictly country schools in the State does not exceed 10 pupils for each school. In hundreds of districts the number of school district officers exceeds the number of pupils of average attendance. Under such conditions it is practically impossible to maintain interest in the school work, either in the community or among the pupils and patrons; the school is conducted in a perfunctory manner, and school spirit is at a minimum. An instance recently came to my attention of a teacher who asked to be released from an unexpired contract to teach in a school of two pupils, giving as her reason that the hopeless task of endeavoring to arouse interest in study under such conditions would drive her insane.

It may be argued that the law now provides for the annulling and consolidating of weak districts, but local sentiment stands in the way and clings to the old organization more from love of what it has been than from respect for what it is, until the results from such provisions of the law are meager and barren. From an economic point of view, the waste of the State school money under the district system is both startling and ludicrous. One of the officials of this department reports visiting a country school in company with

the school commissioner of the district, and finding there a teacher at work on a piece of embroidery, but with no pupils in attendance. Inquiry elicited the information that the school had been in session three weeks without any pupils, and that there were only two children of school age in the entire district, both of whom were expected to attend the school later on. It is certainly unfortunate that such a condition should be even possible in a State that stands first among the States in population, wealth, and natural resources. . .

Uniform Standard for Teachers' Licenses—The weakest feature of our school system is in the different standards set up in the different cities, relating to the examination, licensing, and employment of teachers. In some cities, even State certificates and normal-school diplomas are not accepted. This action can hardly be justified. A State certificate, in my judgment, is the highest grade of certificate issued in the United States.

Circumstances have arisen in some of the cities in this State during the past year, showing the necessity of the State having authority to determine the standard of qualifications which all teachers should possess. It should not be recorded against the creditable record of this State in educational work, that there is a single city within our borders in which teachers are removed, or employed, at the behest of any political organization, or for the purpose of increasing the power or political prestige of any individual.

It has long been recognized, by the highest educational authorities of the State and nation, that the power which examines candidates for teachers should never be authorized to give employment to the persons thus examined. This proposition is firmly fixed in the estimation of our best educational workers.

All rules and regulations governing examination and licensing of teachers should emanate from a central authority and should be uniform throughout the State, suited to different grades and conditions, from the primary to the high school. If one city desires as high a standard as another it must accept like conditions. A certificate to teach, good in one city, should be good in another, subject to certain regu-

lations, such as temporary employment for a year, as a test, etc. It seems absurd that Buffalo, Rochester, Syracuse, Utica, Albany, New York, and Brooklyn should each have a separate standard by which teachers are licensed.

Of the thirty-eight cities in this State, twenty-four have voluntarily adopted the uniform system of examinations, and all teachers who are now employed in these cities must possess the qualifications prescribed by this department. There is not a city in which the system has been adopted in which it does not work to the entire satisfaction of the teachers and school authorities of such cities. In five of the remaining fourteen cities the method of determining the qualifications of teachers by local authorities is satisfactory; in two others no teachers are employed who are not graduates of normal schools of this State, or equivalent institutions. In one city part of the territory is under the jurisdiction of a school commissioner, who examines and licenses under the uniform regulations all teachers employed, while in the remaining portion of such city the power to examine and license the teachers employed therein is under the control of the board of education. The cities of Cohoes, Dunkirk, Hudson, and Lockport have voluntarily adopted the uniform system of examination during the past year, and other cities now have the subject under consideration.

Superintendent George I. Aldrich, Newton, Mass. . . Report for 1896

Children's Reading—In the pages of an eminent English educationist one may see it stated that, "Reading is the art of pronouncing words at sight of their visible characters." A French writer of equal eminence says that "Reading is the translation of written or printed language into spoken language." Both statements are misleading and mischievous. They do, indeed, define one sort of reading, if we add to them certain implications of which the authors say nothing. They are mischievous, inasmuch as they emphasize vocal action as the essence of reading. Now, if one considers the matter, he finds that oral reading—not mere word-calling—is composed of two elements. Antecedent to the vocal action, and imparting to it whatever value it possesses, is

mental action. We need a definition which shall bring out the truth that the essence of reading is this mental action: what the mind does, not what is done by the tongue, teeth, lips, and palate. Such definition may be worded, "Silent reading is the apprehension of the thoughts and feelings presented to the mind by written or printed language." If to this we add the statement that "Oral reading is the vocal expression of the thoughts and feelings presented to the mind by written or printed language," we have a fairly satisfactory answer to our inquiry as to what reading really is.

If the foregoing definitions be accepted we perceive that the expression "intelligent reading" contains one unnecessary word, while the expression "mechanical reading" involves something very like a contradiction. In his oration on "The American Scholar" we find Emerson saying: "One must be an inventor to read well," and, again, "There is then creative reading as well as creative writing." From such expressions it is evident that his conception of reading agrees with that set forth by the definitions last quoted. What, now, taking into view the eight or nine years which constitute a common-school course, should we attempt to accomplish for pupils through the instrumentality of reading? In other words, what are the ends which an intelligent body of teachers will hold consciously before themselves as they carry on this one of the subjects of school instruction? First, in order of time, certainly, possibly first in importance, is the securing by pupils of an early, complete, and pleasurable command of the art of reading. Very simply stated, pupils must be taught to read well at the earliest possible day, and must be so taught that they shall enjoy the occupation. Second among the ends referred to comes the development of a love for good reading. It is not enough that the pupil learns to read; not enough that he enjoys reading; the intelligent teacher feels that his work is not accomplished unless his pupils develop a love for the reading of good books. Finally, as a third end, there must be established among pupils the reading habit as a present and future means of pleasure and profit.

The mere statement of these ends has not required many words, but the realization of them in practice demands, on

the part of teachers, not only a high degree of technical skill, but also a large measure of personal culture. How shall a teacher direct wisely the reading of children who is himself ignorant of books? Or how shall he inspire them with a love of classic literature, who himself reads only trash?

It is evident that a body of teachers who have clearly in view these or similar ends, and who are earnestly striving to attain them, have pitched their work on a high plane. Any attempt at full discussion of the problems which present themselves, when an effort is made to bring about such results, would be out of place at this time. As already suggested, I am only desirous of saying enough in regard to the subject under discussion to render it evident that in the present management of the schools the older subjects of instruction are in no way neglected. Foregoing then any discussion of method in connection with the teaching of reading, I may speak briefly of the matter of reading material.

If we go back twenty-five years we reach a time when the material provided at school for the pupils consisted of a single series of readers. At its foot stood the primer and at the top the Sixth Reader. Many of the selections in the advanced numbers of the reading series were of undoubted merit, and it is undeniable that the pupils generally learned to read. Whether the two higher ends already referred to, viz., a love for good reading and the establishment of the reading habit were attained is doubtful. We may properly refer to the time of which I speak as the "era of the single reader." In the early seventies sprang up an active discussion of this subject of reading material for schools. Making no attempt to outline this discussion, I may remind you that its outcome resulted in liberal addition to the number and variety of books provided for pupils' reading. At about the same time certain towns and cities adopted the policy of providing books at public expense. This practice, at first voluntary, increased rapidly, and, at length, resulted in our free text-book legislation. The single reading series was supplemented by the purchase and use of other series of readers—by the purchase of magazines, books of travel, biographies, books on natural history, fiction, etc.

Thus came about, in many schools, what we may speak of as the "era of supplementary reading material." It was undoubtedly attended by some advantages, but was not free —as is now evident—from certain errors. Our zeal in the increase of reading material often outran our discretion in the selection of it. Carried away by the idea that pupils were to learn to read by reading widely; by the idea that they attended school not to learn to read some particular series of readers but any material suited to their intellectual development, we lost sight of some important considerations.

If there were time, I should be glad to dwell on the fact that schools have ordinarily put too high an estimate on the importance of oral reading, while they have as universally underestimated the importance of silent reading. Adequate discussion of this point would lead us to agree that, whether the school life of the child be considered, or whether we turn our attention to his subsequent adult life, silent reading is by far the most important. Just now it suffices to observe that the time available for oral reading at school is very short. To what material shall it be devoted? Not in the main to books which entertain, not even to those which inform. These books must be read silently by the pupil and without the constant oversight of the teacher. Matthew Arnold has a remark pregnant with truth. He says, "The good is always the enemy of the best." In how many reading classes has this proven true! Not only have we given to oral reading a more prominent place than it deserves, but we have put too high a value on mere fluency in reading. I fear it happens oftener than not that the content of the reading material put into the hands of children is distinctly beneath the stage of development which they have reached. The page of the Third Reader may present some mechanical difficulties to the bright scholar who is occupied with it, but how rarely it transcends his experience in such a way as to leave him intellectually richer from having wrestled with it.

Progress in education comes slowly. The great majority of American schools are still in the "era of the single reader," only a minority have reached the "era of supplementary reading material." Our own schools some years since attained this second stage, and the question arises, shall we

rest there? Shall we regard it as the final stage? By no means. It is full time that they emerged from it and entered upon a third era, which we may speak of as " the era of classic literature."

No one need be alarmed at the sound of these words, even though we are discussing children's reading. Henry Ward Beecher used to say that he " never liked to see a thirty-year-old head on a twelve-year-old boy." We shall not expect our twelve-year-olds to read now what they will read and enjoy at thirty. We shall only strive to put before them the best in existence which is suited to their present capacities. If we are asked to state the main end of literature, we shall say it is to spiritualize life; to inspire and feed the higher forces of human nature. Nobody doubts that books exist which do this for adults, and so there are books which do the same thing for children. Indeed, it is only as children are nurtured in the best reading material that, as adults, they will turn to it.

In common with many other communities we find ourselves possessed of large quantities of school reading material which must be regarded as unsatisfactory. Not that it is bad in itself, but that it occupies shelf room, and, so far as it is used, occupies hours which come to the pupil but once, and which ought to be devoted to books of a higher order. For some years we have been displacing the undesirable material as rapidly as circumstances would allow. The policy should go steadily forward until we have left, for use as material for the oral reading exercises of the schools, only those books to which the term classic may properly be applied. To some minds the term " classic " will suggest that which is dry, uninteresting, hateful. Nothing is further from my thought. To the romance of Hawthorne, the poetry of Emerson, the drama of Shakspere the term may be applied. That such material, skillfully used, appeals to pupils is a matter of experience in many a schoolroom.

IX

EDITORIAL

The school year that is closing records a progress of which the city of New York may well be proud. Mayor Strong's administration, working under the happy conditions brought into existence by the Reform School Law, has perceptibly raised the whole tone of the school system. The work of the Board of Education was never so well or so intelligently done. The Board has had to do more than its fair share because of the incompetence of a majority of the Board of Superintendents and because that Board absolutely lacks the confidence of the community. But this is a mere temporary condition. Year by year strong men can be chosen instead of weak ones, broad men instead of narrow, to vacancies on this Board.

School buildings, thoroughly modern in design and well-equipped, are being rapidly provided. The legislature of 1896 authorized the expenditure of $5,000,000, and that of 1897 $12,500,000, for school sites and buildings. Business-like methods of procedure have displaced the dawdling and the rhetorical rhodomontade of the days of the dominance of the "school ring." The principals and teachers are feeling the new spirit at the center, and many of them are responding to it. Others hold back, believing that the election of a Tammany mayor may restore the old order of things. But if the November election disappoints this hope, there will be permanent progress all along the line.

The Board of Education has had many difficult and delicate questions to face, but it has never flinched. In appointing Mr. Frank Damrosch to be supervisor of music, it did the best thing possible. Its course in dealing with the high-school problem has been courageous, disinterested, and tactful. Utterly regardless of the fact that New York has no high schools and no teachers of high-school experience, a

clamor was raised by a small and provincially-minded element in the community in favor of choosing "tried and experienced New York teachers" to be principals of the new high schools. The clamor was stupid and silly, of course; but the Board of Superintendents was just weak enough to be influenced by it, and side by side with Principal Buchanan of Kansas City and Principal Wight of Philadelphia, it nominated a New York grammar-school principal, Mr. Childs, for the third high-school principalship. Mr. Childs is a good elementary-school principal, and his school is, in many respects, excellent; but his friends could produce no evidence whatever of his qualifications to organize and conduct a high school. The Board of Education demonstrated its moral and intellectual superiority to the Board of Superintendents by declining to confirm the nomination of Mr. Childs, and his name was withdrawn. After a slight delay the name of Principal Edward J. Goodwin of Newton, Mass., was presented, and he was promptly confirmed.

The charge that the Board of Education has discriminated against New York teachers in this matter is, of course, a willful lie. New York candidates would have been appointed promptly enough, if they had had the training and experience necessary for the task. A great deal is expected, and very properly so, from Mr. Buchanan, Mr. Wight, and Mr. Goodwin. Their past history is assurance enough that they will improve this opportunity to make a great reputation and to render a memorable service to the city of New York.

On the first Tuesday of May a new school law went into operation in Milwaukee, and from its operation much good is expected. The main provisions of the law are these:

The present school board of forty-two members is legislated out of office after the first Tuesday in May.

The new board will consist of one member from each ward, instead of two, as heretofore.

The members of the school board, to be known hereafter as school directors, will be appointed by a commission of four members, instead of by the Common Council.

The Mayor appoints the commission of four, not more than two of them to be members of the same political party, for a term of four years, one expiring annually.

No person is eligible for appointment as member of the commission or school board if he is an officer of a political organization, or holds public office of profit other than judicial.

The term of the superintendent of schools is made three years instead of two; that of his assistant and of the special supervisors for the same period. Salaries remain as at present: Superintendent, not exceeding $4000; assistant superintendent, not exceeding $2500.

The secretary of the board is also made secretary of the commission. Salary of $2000 unchanged, and tenure of office unchanged during good behavior.

Selection of text-books to be determined by the superintendent, assistant superintendent, president of the board, and two members of the board appointed by him, subject to the approval of the board.

Teachers to be appointed and certificated, transferred, or promoted by a committee consisting of the superintendent, assistant superintendent, president, and two other members of the board, subject to approval of the board.

Teachers to be dismissed for incompetency or inattention to duty by a committee comprising the superintendent, assistant superintendent, president of the board, and two other members of the board, without recourse to the board.

The board of school directors is required to meet the first Tuesday in May and organize, the president elected to serve one year.

Absence without satisfactory reason for four consecutive meetings causes a vacancy, which is to be filled in the usual manner.

Members of the board are to be subject to laws and restrictions governing members of the Common Council.

The school board commission may remove any member of the board for causes for which members of the Common Council are removable.

The board shall not in any one year contract any debt or incur any expense greater than the amount of the school funds subject to its order, without a previous ordinance or resolution of the Common Council.

A majority of the members of the board who have duly qualified shall constitute a quorum for the transaction of business, but a smaller number may adjourn. A majority of the whole board shall be necessary to elect any officer authorized to be elected by said board.

Regular meetings of the board must be held once each month, and special meetings on call.

The board, subject to the approval of the Common Council, is authorized to establish schools when needed.

The selection of sites for school buildings and the adoption of plans for the erection of school buildings shall be determined, first, by the concurrent action of a committee consisting of the superintendent of schools, the president of the school board, the building inspector of said city, the members of the board of public works, the chairman of the committee on schools of the Common Council, and the chairman of the committee on public buildings and grounds of the Common Council, selections to be approved by the council. In event of a minority of three opposed, the council shall decide.

The board shall define school districts, and employ janitors and fix their salaries.

The board is required to elect a superintendent of schools the first Tuesday in March following their first appointment, his term to be three years.

The superintendent shall, in connection with the assistant superintendent and the president of the board, and two members of the board to be appointed by the president acting as a committee, examine, certificate, employ, classify, transfer, and promote teachers for the several public schools of this city, and determine the course of study.

The superintendent and assistants now in office may continue to hold their positions until the board election next year.

The superintendent of schools, or the secretary of the board, may be removed from office for misdemeanor in office, incompetency, or inattention to the duties of his office, by a vote of two-thirds of the board.

The law provides that the board shall be governed in all things by the school laws of the State, except as they are altered or modified by this act.

It is expressly provided that the new law is not intended to affect the term of office of any person now serving in any capacity by virtue of an appointment heretofore made by the school board.

It would seem, at first sight, as if this law were unnecessarily cumbrous, and that it had not succeeded in eliminating all of the bad features of the previous law. For example, it is a grave mistake to compel the appointments to the school board to be made by wards; they should be made for and from the city at large. It is also a mistake to insist upon the concurrence of the Common Council in establishing new schools. It is another mistake to give laymen, members of the Board of Education, any share in the initiative in certificating, appointing, or transferring teachers, or in the selection of text-books. Mr. Fitzpatrick clearly indicated the sound administrative policy in these respects in his article in this REVIEW for May.[1] It is difficult to understand, too, why the novel device of a bi-partisan appointing commission is necessary. It is a simple and more responsible method to empower the Mayor to appoint direct. It is a tribute to the general provisions of this law, however, to know that it was supported largely by good citizens and opposed chiefly by the professional politicians.

[1] XIII : 490.